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ABSTRACT

To determine the effectiveness of the Appalachian Maryland Experience-Based Career Education (EBCE) Project in meeting its aims and objectives, a third-party evaluation was conducted for 1977-78. Forty students in grade 12 participated in the project, spending four days a week at selected career sites and a day at the EBCE Learning Center receiving instruction from learning coordinators. In order to gather evaluation data, the students, as well as their parents, employers, and EBCE staff members, were interviewed. They were also given pre- and post-tests, including the Career Skills Assessment Program of the College Entrance Examination Board. A follow-up process was used to identify career patterns of first- and second-year project students. Based on the data collected, it was concluded that (1) the project received substantial support from the community; (2) students made significant gains in academic subjects as well as career decision-making and employment-seeking skills; (3) students' motivation level toward school was increased; and (4) the project was well managed, implemented, and publicized. It was recommended that the job sites be analyzed for strengths and weaknesses; feedback about the students be formalized; a full set of academic tests be given on a pre/post test basis; graduate followup be continued; local dissemination be aimed at parents and non-EBCE personnel; and an action plan be formulated for local adoption of the program. (ELG)

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EXECUTIVE SUMMARY OF A THIRD PARTY EVALUATION OF THE APPALACHIAN MARYLAND EXPERIENCE-BASED CAREER EDUCATION PROJECT: 1977-78

Federal Grant Number:
J03-76-00231(502)

Submitted to

George Allen, Executive Director
H. Eugene Hall, Project Director
Regional Education Service
Agency of Appalachian Maryland

by

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College of Human Resources and Education
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November, 1978

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U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
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EXECUTIVE SUMMARY

Background

The Office of Educational Research and Field Services, West Virginia University, conducted a third-party evaluation of the Appalachian Maryland Experienced-Based Career Education Project (EBCE), 1977-78. The EBCE Project was administered by the Regional Education Service Agency of Appalachian Maryland with the cooperation of the Allegany County Board of Education. Funds were made available by the United States Office of Education under Part D, Section 142 (C), Vocational Education Act.

During its second year of operation, the EBCE Project sought to provide experiential learning activities for forty twelfth-grade students. The Project began officially in October, 1977, with an initial roster of 32 students; in January, 1978, eight more students were added to the program. In this model, which was developed by the Appalachia Educational Laboratory (AEL), Charleston, W.Va., the students spent four days a week at selected career sites and a day at the EBCE Learning Center, where they received instruction from the Learning Coordinators. Students were selected from a pool of interested applicants. After an initial week of orientation, the EBCE students were given an individualized learning program, which reflected their academic requirements, basic skills, and career interests. Equipped with a personalized set of objectives and individual activity sheets, the students chose various local sites at which they spent anywhere from two to thirteen weeks.

An additional feature during the second year of the project was the expanded effort of the state networking management team to disseminate the AEL model to many of the 23 county LEA's in the state of Maryland. A coordinator was appointed to direct this component.

Organizationally, EBCE was implemented by a local Project Manager, and staffed by two Learning Coordinators, a Site Analyst, and a Secretary. Their functions were coordinated jointly by the Project Director, a RESA official, and an Allegany County Board of Education liaison. RESA maintained ultimate responsibility for the Project.

Through such mechanisms as the Community Advisory Council (CAC), a broadly-based group of thirty-five community leaders in business, industry labor, government, and education, the Project identified over 200 potential local career placement sites. When a site became operationalized, a resource person was chosen to work with the student and to serve as a liaison between the Project and the job site.

Purpose and Design of the Evaluation

The purpose of the evaluation was to determine the EBCE Project's success in meeting its aims and objectives. The Evaluator utilized a Context, Input, Process, and Product (CIPP) design in order to determine the interrelationship of procedural and intended elements with product and actual results. The Evaluator translated the Management Plan into an evaluation design and identified specific goal areas in order to categorize the primary parameters of the Project. In turn, the goal areas were analyzed by means of target evaluation questions. These questions, and the attendant instruments, data gathering methods, effectiveness criteria, and primary data sources, became the principal format for deriving conclusions and recommendations.

Before presenting the major conclusions and recommendations, it is appropriate to describe the principal research methods and instruments utilized by the Evaluator. To assess the important aspect of student outcomes, the Evaluator administered the CTBS, Form S, Level 4. The tests used were: Reading Comprehension, Mathematics Application and Concepts, Social Studies, and Science.

The newly developed Career Skills Assessment Program (CSAP) of the College Entrance Examination Board was used to probe the students' career decision-making and employment seeking skills. These instruments, in combination with a Student Profile Sheet, were administered on a pre/post test basis. Appropriate statistical analyses were used, conversions to national norms were carried out, and estimated standard scores were computed for the CTBS battery.

Qualitative and perceptual data were acquired from interviews and questionnaires administered to parents, employers, EBCE Project staff, RESA, representatives of the Board of Education, and the students themselves.

A follow-up process was also carried out to identify the academic and career patterns of first and second year EBCE graduates.

Salient findings from these instruments prompt the following major conclusions about the EBCE Project. The conclusions are categorized by the Project area to which they attend.

A. Community Support

The EBCE Project produced substantial support from the local community. Based on the number and variety of career placement sites, the continued leadership of the Community Advisory Council (composed of thirty-five dedicated representatives of the major socio-economic and political strata in Allegany County), the direct support of employers and resource persons, and the unanimous endorsement of the parents of the participating students, the Evaluator has concluded that the support of local constituents and community for EBCE is unequivocally strong and impressive.

B. Academic Quality

Precise quantitative measurements of academic achievement were made possible through the use of the CTBS battery. It was found that the students made significant post test gains in Reading Comprehension, Mathematics Application, and Science. Impressive gains--also statistically significant--occurred in the two parts of the CSAP: Career decision-making and employment seeking skills. In this context, EBCE students demonstrated exemplary academic progress, and their attitudes towards education generally improved as a result of participation in this Program. Furthermore, from a procedural standpoint, the Evaluator concluded that the EBCE staff, its Manager, Learning Coordinators, and Site Analyst were highly competent. The curriculum and instruction phases were congruent with county standards and generally quite excellent.

Finally, the important aspect of student motivation to learn was taken into consideration in this evaluation. It was found from students' and parents' perceptions that the EBCE students increased their motivation level toward school as a consequence of EBCE.

C. Organizational Implementation of the Project

Probing the managerial domains of decision-making, dissemination and communication, and replication and development, the Evaluator concluded that in general terms the Project was well managed, implemented, and publicized. The EBCE Project was well coordinated at the level of RESA, the Allegany County Board of Education, and the technical staff. The Management Plan provided an orderly and systematic vehicle for coordinating otherwise diverse functions of the project. Lastly, the administrators are making substantial progress towards the integration of EBCE as a permanent feature of the County school system and expansion to other districts in the state of Maryland.

RECOMMENDATIONS

Based on the major conclusions derived from available data, several summative conclusions were suggested by the Evaluator to further the development of the Project during its second year of operation. The most significant of these conclusions were:

1. An analysis be made by the project staff to identify the strengths and weaknesses of the job sites, including an examination of the instructional capabilities of the resource persons, the quality of the learning environment, and an estimate of unique features of the sites which might attract certain students and repel others.

2. Similarly, the flow of communication from the program to the resource sites should be strengthened by formalizing the feedback about the students. This priority area of concern should include an indepth analysis of the amount of time that a Learning Coordinator (LC) can spend at a site once the student is placed because of the increase in the number of students that the LC is currently serving.

3. In order to obtain a full measure of the academic potential of each student, the full battery of the CTBS instrument should be administered. Thus, all ten tests would be administered on a pre-post basis.

4. The follow-up of first and second year graduates of EBCE should be maintained regularly by the program staff and a standard form should be developed to pinpoint academic and career patterns for these individuals. This is necessary in order to gauge the long-term impact of EBCE on its participants.

5. The direction of local dissemination should be aimed at such audiences as parents and non-EBCE teachers and other school personnel so that these groups understand the nature of EBCE and its accomplishments to date. The groups will be particularly influential during the post federal funding phase.

6. In planning for the local adoption of the program over the next several years, project administrators should consider several specific steps in the formulation of the action plan. A convenient checklist for determining the maturity of this action plan is contained on page 10 (Chapter 1) of this report. Of the thirteen criteria, the evaluators would suggest that the following be given immediate priority:

   --the program is accepted by non-EBCE staff.

   --Existing transportation regulations are altered to carry out EBCE activites.

   --The central office commits other resources to the development of the project.

--EBCE is housed in a permanent facility.

Coda

By far, the most impressive feature of the second year EBCE program was the student gains in academic skills and career skills. This phenomenon deserves the careful attention of the Allegany County School District, the Maryland State Department of Education and the United States Office of Education because it suggests that experiential learning contains unique advantages in meeting the academic and occupational needs of certain adolescents.

The level of community support was also singularly outstanding in the Allegany County community and is a hallmark of this project.

The management aspect of the total project has improved considerably with the development and utilization of a project Management Plan. The administrative functions of the various agencies have been clarified, resulting in an atmosphere of collaboration and joint decision-making. The ingredients for successful continuation of the project are present.

A THIRD PARTY EVALUATION OF THE APPALACHIAN MARYLAND EXPERIENCE-BASED CAREER EDUCATION PROJECT: 1977-78

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The evaluators equally appreciate the cooperation of the participating principals, guidance counselors, and teachers in Allegany County. Likewise, we express a note of gratitude to members of the Community Advisory Council, participating employers and resource persons, and others in the local community whose efforts were indispensable to this Project.

Most especially, the evaluators congratulate the 40 EBCE students and their parents for their perseverance and admirable contribution to this endeavor.

Within its own ranks, the Office of Educational Research and Field Services extends its appreciation to Ms. Nan Brenzel, Mr. Steve Scherer, Ms. Kim Harper, Mr. Steve Wolfe, and Mr. Brent Kepner. Dr. John Paterson, Professor of Educational Psychology, provided invaluable technical assistance. Mrs. Wilma Phillips typed the final document, and her contributions are

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A Third-Party Evaluation of
The Appalachian Maryland
Experience-Based Career Education Project:
Second-Year Report

CHAPTER I

INTRODUCTION, BACKGROUND AND CONTINUED IMPLEMENTATION OF EBCE

The Regional Education Service Agency (RESA) of Appalachian Maryland in cooperation with the Allegany County Board of Education administered an Experience-Based Career Education Project (EBCE) under a grant from the United States Office of Education. During its second year of operation, October 1, 1977 to September 30, 1978, the Project served 40 students from nine high schools in Allegany County. Moreover, the Project featured a special dissemination component for presenting the EBCE approach to other school systems in the state of Maryland.

The primary purpose of this report is to evaluate the progress of the EBCE Project in meeting its stated objectives with respect to its status as an alternative educational program within Allegany County. The report also assesses its progress in disseminating the EBCE model to other school systems in Maryland.

Goals and Objectives of Career Education

Various definitions of Career Education have been put forward. Kenneth B. Hoyt succinctly yet comprehensively defined it as "the total effort of public education and community to help all individuals become familiar with the values of a work-oriented society, to integrate those values into their personal value systems, and to implement those values in their lives in such a way that work becomes possible, meaningful, and satisfying to each individual."* He developed from this definition a list of three significant objectives, which are dependent upon Career Education's goal of preparing all students: (1) to help all individuals to become familiar with the values of a work-oriented society; (2) to encourage individuals to integrate their work values into a personal value structure; and (3) to assist individuals in implementing work values in their lives.*

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*In Career Education: Contributions to an Evolving Concept (Salt Lake City, Utah: Olympus Publishing Company, 1975), p. 156.

Programmatic Assumptions

To explain the education-specific conditions of Career Education, several programmatic assumptions have been advanced, the most significant of which are the following:

1. Student motivation increases in direct proportion to the clarification of a student's understanding of the relationships between education and work.
2. There is no one supreme learning strategy or approach. A variety of educational stimuli is advantageous.
3. Success in one's work is dependent upon the acquisition of vocational skills. There is less and less demand for unskilled workers.
4. The maturational patterns of Career Education differ for each individual.
5. The elementary school years are critical for the development and formation of work values and personal values.
6. Full freedom of occupational choice is impeded by job stereotyping, especially for females and members of minority groups. This hindrance can be reduced through specific programmatic intervention strategies.
7. The same general strategies used in reducing worker alienation in industry (see Herzberg and Maslow) can be applied to reduce worker alienation among students and teachers in the schools.
8. Career decision-making skills can be learned by students, to fortify their career development.
9. Work can be satisfying and can stimulate self-understanding and self-importance through concrete accomplishments.**

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*Hoyt, pp. 157-58.
**Based upon Hoyt, pp. 22-26.

General Effects of Career Education for Education

The leading proponents of this movement stress its overall beneficial effect on the American school curriculum. They point, first of all, to its potential for improving the quality, quantity, and variety of vocational education. They envision a curricular enhancement through a wider variety of course options, accompanied by a de-emphasis upon differentiated college-preparatory, general-education, and traditional vocational education offerings. Secondly, several modifications of the existing structure of instructional curriculum are necessary to allow for these features: a greater utilization of education technology; increased participation of students, teachers, parents, and representatives of business, industry, and labor in setting educational policy; credit for student experiences outside the conventional curriculum; assessment of students on a performance basis in lieu of the Carnegie Unit method; year-round school; greater flexibility of scheduling, to encourage teachers to develop career strategies in their classrooms; and improved career guidance, counseling, placement, and follow-up functions in the schools. In addition, career educationists advocate a complete overhaul of teacher education, in order to incorporate Career Education at all educational levels.*

Specific Learner Outcomes

The USOE has identified nine learner outcomes to be effected by Career Education.

Career Education intends to produce students who are:

1. competent in the basic academic skills required for adaptability in our rapidly changing society;

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*Hoyt, pp. 30-32.

2. equipped with good work habits;
3. capable of choosing a meaningful set of work values, leading to a desire to work;
4. equipped with career decision-making skills, job-hunting skills, and job-getting skills;
5. equipped with vocational personal skills at a level which will allow them to gain entry into and attain a degree of success in the occupational society;
6. equipped with career decisions which they themselves make, based on the widest possible set of data concerning themselves and their educational-vocational opportunities.
7. aware of means available to them for continuing and recurrent education, after they will have left the formal system of schooling;
8. successful in being placed in a paid occupation, in further education, or in a vocation which is consistent with their current career education;
9. successful in incorporating work values into their total personal value structure in such a way that they are able to choose what, for them, is a desirable life style.*

Career Education, in sum, is a still-developing educational movement, which is directed towards the infusion of practical work values and career preparation into all phases of the American educational system. It is a comprehensive approach with definite pragmatic overtones; it is aimed at directing a large portion of the K-12 curriculum towards the career aspirations and needs of that majority of students who seem to require an alternative to the entrenched college-preparatory and general-education offerings. It focuses upon the significance of work as the conceptual cornerstone of education.

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*Hoyt, p. 29.

The EBCE Approach

EBCE is an alternative educational approach to reduce the chasm between the classroom and the world of work. In contrast with other Career Education approaches, the EBCE concept focuses on adolescents (ages 13-18); it provides business and industry settings for junior and senior high school students who might benefit from an alternative to the traditional school setting. As a national movement, EBCE has several distinguishing features. First, it encourages personalized or student centered learning to all students. Second, it makes use of cooperative experience sites in the community for learning activities. Third, it produces materials and procedures for fusing academic and career learning.* Under the sponsorship of the National Institute of Education, four regional EBCE models have been developed to offer specific strategies and techniques for experiential learning. After approximately seven years of implementation, these models have become a prominent characteristic of many school systems. In one form or another, EBCE has been adopted by 140 school systems, with 15,000 students involved with 14,000 work and community resource persons.

To gain a more specific understanding of EBCE, it is helpful to include a very brief profile of each of the four models.

1. The Appalachia Educational Laboratory (AEL) Model. The AEL model is depicted as a "total alternative to traditional course work." Its students spend about 80 percent of the school week in community experiential learning sites. During the remaining 20 percent of their time, the students engage in tutorial conferences with their learning coordinators to complete their academic work. The curriculum is described as "concept-centered," and the academic course work is blended with career explorations in the community.

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*National Directory of Experience-Based Career Education Programs, Far West Lab for Educational Research and Development, May 1978, p. 1.

2. The Far West Laboratory (FWL) Model The prominent characteristic of the FWL model is its inherent elasticity both with respect to time and type of learner served. The range of time spent by a given student in the community may range from 20 to 80 percent. Furthermore, the model may be arranged to concentrate on a specific target group of students--for example a separate school or a group of part-time students. Somewhat unlike the AEL approach, the FWL model stresses group experiences for the students in the form of seminars and workshops. The FWL model also allows students to obtain academic credit for community experiences and research.

3. The Northwest Regional Educational Laboratory (NREL) Model. In this model, the time spent at school and at community sites is split evenly (50% at each). The NREL stresses a comprehensive, interdisciplinary program of academic studies. For assessing and monitoring experiential learning, the model makes use of a "detailed task analysis procedure" to match the student with the most appropriate community site. This task analysis procedure is then refined into a set of learning objectives, which serve as the basis for the student's individualized experiential projects.

4. The Research for Better Schools (RBS) Model. In contrast to the other three approaches, the RBS plan calls for only 20 percent exposure to a community site. The vast majority (80 percent) of the student's week is spent in the classroom. The experiential or community component is realized through group mini-courses conducted at community resource sites and independent study projects. Moreover, RBS features an Academic Resource Center for individualized learning as well as group guidance instruction for identifying student career possiblities.

Thus, the four models have several commonalities, particularly in their use of individualized academic programs and career education materials. The two characteristics which distinguish one model from another model are: (1) the time spent by the student in the community, the range for which extends from 80 percent in the AEL model to 20 percent in the RBS model; and (2) the emphasis on a group approach versus a more individualized learning plan.

General Conditions Affecting the Development of EBCE

In order to obtain a deeper understanding of the nature and current direction of the EBCE movement, it is necessary to supplement the portrait of the four models with a description of the general conditions surrounding the development and refinement of this alternative educational approach at the local level.

Many of the national concerns about the development and direction of EBCE can be summarized by means of two classifications: Aims and Institutionalization concerns.

1. Aims. A central concern present in the literature of EBCE is the relationship of this innovation to the reduction of youth unemployment. It is usually asserted that EBCE can play a major role in realizing this goal because it has as one of its principal objectives the formal linking of the world of education to the world of work. Thus, one of the yardsticks to measuring the long-term effectivemess of EBCE will inevitably be its success in placing students into worthwhile and secure fields of employment. Less directly, the movement will be judged by the degree to which its participants and administrators awaken the community and the educational establishment to fostering a concerted attack on diminishing the staggering underemployment of male and female adolescents.

It would seem to be axiomatic that any EBCE program wishing to address this aim would compile accurate and systematic follow-up information about its graduates and keep records about their future employment and/or academic progress in college and other institutions of further education. Its accomplishments as well in bridging the gap between the ideologies and mind-sets of the marketplace with those of the classroom should also be detailed.

A second prominent aim of EBCE is to reduce sex role stereotyping by providing its students with multiple career experiences within an atmosphere devoid of social and psychological repercussions. This surely means more than encouraging girls to be lumberjacks and persuading boys to be nurses. It has a deeper purpose behind it than producing shocking occupational transformations overnight: The aim is one of improving the status of women in the labor market and of allowing both sexes the opportunity to engage in an almost infinite number of high quality experiences that they might otherwise be unaware of or, more probably, be unable to engage in without professional guidance and placement.

The "track record" of EBCE in meeting this challenge will require obtaining attitudinal as well as purely demographic data. Again, the movement's indirect effects in calling attention to the "sexist" tendency in American schools and businesses should also be emphasized.

Closely linked to the so-called career aims of EBCE is the desire to make the students' academic experience more meaningful and rewarding. It is expected that a student will reap a richer educational harvest and in the process improve his or her performance and attitudes when classroom subjects have a relationship to the "real world."

If EBCE is to make significant progress toward this goal, it must be able to demonstrate its accomplishments. The need, then, for a strong academic component of high quality becomes all the more important. Concomitantly, learner outcomes must be assessed through both standard (e.g. CTBS tests) and experimental (individual competencies and program specific measures) techniques. In short, like any innovation, EBCE "has something to prove" because it has proclaimed itself to be a significant alternative for transforming secondary education.

In this regard, its claim to providing realistic, career-enriching experiences must also stand the test of critical examination. Just as its academic activities must be of high quality so too must its work-related experiences. These experiences must not be engaged in just for the sake of experience; rather thay must be of superior quality, directed toward fulfilling individual goals and program objectives--most notably, the integration of academic activities with career aspirations.

In summary, EBCE's aims are especially challenging and lofty. Its proponents must be particularly mindful of these stated purposes and devise the proper tools of assessment for gauging their success.

2. Institutionalization. After half a decade of federal sponsorship and direct funding, many EBCE programs must come to grips with the reality of local continuation within their school systems. Institutionalization signifies the process whereby the central office of the school system, the building administrators and staff, and the business community implement a plan and a means of organization for integrating EBCE into the existing educational structure. Integration requires considerable commitment and financial support from these parties if EBCE is to retain its unique character. Upon the cessation of funding from Washington, the temptation to reduce the program to its bare essentials is very strong. In cases already recorded, this means that special EBCE resources become underutilized or even discarded altogether. The program becomes a mere shadow of itself, with professional participants no longer being trained in its special types of delivery and the program being so submerged within the conventional curriculum that it is no longer recognizable. This is an instance of

adaptation in reverse. EBCE becomes so adapted by the prevailing educational system that it loses its identity, its vitality, its spark of innovation.

Two recent essays on this subject, in the Proceedings of Second Annual Experience Based Career Education National Network Conference, provide several concrete measures to determine how well institutionalized EBCE is in a given school system. These suggestions represent a very enlightening application of the dynamics of infusion to the plight of EBCE in maintaining itself in a post-federal funding phase.

The yardsticks by which an EBCE program can assess how much progress it has made towards "mature institutionalization" are:

1. EBCE becomes a regularly offered course.
2. There is wide endorsement by all sectors for the program.
3. Student enrollment in EBCE justifies the number of program staff.
4. In each school in which EBCE is institutionalized, there is a sufficient budget for supplies and materials.
5. EBCE is housed in a permanent facility.
6. The program is accepted by non-EBCE staff.
7. The program is given a priority status by the central office.
8. Where appropriate, rules are changed in a school to accomodate EBCE.
9. Furthermore, existing transportation regulations are altered to carry out EBCE activities.
10. The central office commits other resources in addition to transportation to the development of the program.
11. The tests and grade reports in the school system will reflect career concerns.
12. The EBCE staff can deliver the program without reliance on external support.

13. Costs for EBCE are routinely approved by the board of education.

Some of these criteria may be highly ambitious goals for some school systems, but it is helpful to have an initial register of standards for examining the condition of EBCE during its new phase of local development.

Other Concerns About EBCE

At the Second Annual EBCE National Network Conference,* Kenneth B. Hoyt discussed four strategies for EBCE from the standpoint of its relationship to career education. Hoyt seems to be concerned that because of its inherent structure and its recent momentum, EBCE is becoming a separate movement from career education. Hoyt points out, for example, that unlike career education, EBCE is "an approach that is designed to appeal to some, but not all, of the student body." It also places more emphasis on using the broader community for the acquiring of academic skills, "with classroom teachers best viewed as learning facilitators."

Given these distinctions, Hoyt identifies four tentative strategies to be considered by EBCE educators:

Strategy A: Compete With Career Education

"One obvious strategy available to EBCE is to embark on an ambitious campaign to compete with career education as an approach to educational change. Certainly, the impressive record of EBCE effectiveness provides a powerful base for use by those wishing to adopt this strategy. Such a campaign would logically begin by emphasizing the relative advantages of EBCE over traditional career education in terms of research and evaluation evidence. The record already exists."

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*Washington, D.C., February 28, 1978.

Strategy B: Add EBCE To The Total Career Education Effort

"A second currently available strategy is to embark on a campaign aimed at convincing educational decision makers that a program of EBCE should be added to existing school programs so that the concept of career education can be effectively implemented." In this case, EBCE would be incorporated within the overall career education program in the school system.

Strategy C: Become A Champion Of Experienced Based Education

"A third immediately available strategy for EBCE to consider would demand only that the word "career" be dropped from its title; i.e., instead of being known as 'experienced based career education,' attempt to be known as 'experienced based education.'"

Strategy D: Become An Educational Methodology

"Traditional career education, as you know, is properly viewed more as a methodology for educational change than as a new kind of program, course, or curriculum. It is possible that EBCE might choose to adopt a strategy leading toward joining with traditional career education as an educational methodology."

Hoyt's purpose is expository: to present what he considers to be the alternatives in the inevitable development and "institutionilization" phase of EBCE.

> For my part, I do not pretend - nor contend - that one of these strategies is wiser or more desirable than any of the others. In my view, they are, at present, equally viable and defensible strategies to consider. Obviously, I, as a career education advocate, would hope that the fourth may appeal to most EBCE advocates more than the other three - but that is a hope, not an assumption. In the long run, the strategy - or strategies - adopted by EBCE advocates to institutionalize the knowledge accumulated by the EBCE effort over the last several years must be chosen by each of you who, today, regard yourselves as active participants in the EBCE crusade . No one, I hope, would want it to be otherwise.

The foregoing sketch of the current priorities and challenges confronting EBCE provides a useful background for introducing the Allegany County project. In addition to offering a context within which to understand the objectives and activities of this project, it provides an added dimension for evaluating the Maryland program within the light of national trends and expectations.

THE RESA MARYLAND EBCE PROJECT

Administration

The administrative structure of the RESA Maryland EBCE program did not undergo any noteworthy changes during the second year of operation. The program director Dr. H. Eugene Hall, assumed primary responsibility for the continued implementation of the project during 1977-78. The project director worked in direct cooperation with Federal Programs officer of the Allegany County Board of Education, Mr. John Frank. This relationship encouraged a joint responsibility by both agencies for program planning and policy decisions.

The project staff for the second year was:

--the Project Manager, Ms. Dana B. George

--the Placement/Site Analyst, Mr. James W. Moore

--the Learning Coordinators, Mr. Raymond T. Elliott and Ms. Linda Golden

--the Project Secretary, Leona M. Hirtle

Their duties and responsibilities did not significantly change during the second year of operation. It should be noted, however, that Ms. Linda Golden replaced Mr. John Valenzano as one of the learning coordinators.

Personnel and Title Changes

During the first year of operation, Mr. Jim Wilson served as Project Director for the EBCE program. When he became State Networking Coordinator, his position was assumed by Dr. H. Eugene Hall, the RESA Research and Evaluation Coordinator. Also, a change was made at the Board of Education level. The program liaison during the second year become Mr. John Frank, Federal Programs Officer. This permitted the program to be included within an instructional division of the central office, which would accomodate institutionalization of the project at the local level.

In the process, Ms. Dana George's title of Project Director was changed to Project Manager, at the suggestion of the U.S.O.E. Federal Program Officer.

These relationships and their attendant functions and responsibilities were clearly depicted in the Management Plan developed for the second year of operation (See Chapter II).

Community Advisory Council

The Community Advisory Council continued in operation during 1977-78, composed of 35 community leaders, two of whom, Sister Margaret (Director of Education at Sacred Heart Hospital) and Mr. Lou Baker (National Alliance of Businessmen) served as co-chairpersons. In addition to being a source of valuable input and representation of the program in the local communities, the CAC took on the additional charge of making recommendations for institutionalizing the project after federal funding. The activities and accomplishments of the CAC are detailed in a later section.

Learning Center Facility

The headquarters for EBCE were re-located to more spacious accomodations at Braddock Junior High School, which is located within the City of Cumberland. In place of the one-room all purpose facility of the first year, the Braddock facility featured two rooms, one for the Project Manager (administration), the Site Analyst, and Secretary, and one compartmentalized room for the two Learning Coordinators.

General Objectives

The project administrators translated the program objectives into a Management Plan, detailing a description of major activities in relation to stated goals and objectives. Also, each activity was cross-listed with a target completion date, responsible persons, and comments. The evaluators used the Management Plan in constructing the Evaluation Plan, which took each objective and activity and determined the means and criteria by which it was to be assessed. The Management Plan as incorporated into the Evaluation Plan is presented in detail in the next chapter. However, objectives are singled out for special emphasis during the second year and the assessment of these priorities will form the core of the evaluation.

Project Implementation

The AEL Model, described above as a concept-centered approach allowing considerable (80 percent) opportunity for individualized learning in a community setting, remained as the basic approach for the EBCE project. The number of students eventually enrolled swelled from 23 in the first year to 40 as of January, 1978. Accordingly, the number of high schools involved increased from six in 1976-77 to nine in 1977-78.

Selection of Students. The selection process for the second year student took place in the following manner:

1. Recruitment. The EBCE project staff visited area high schools during the months of January to April 1977 to stimulate student interest and identify potential students for the project. Those students who expressed interest in the program were given information about the program.

2. Screening. On behalf of those students interested in EBCE, a form was sent to the school staff (teachers, counselors, principals, and Office of Pupil Personnel) to determine their eligibility for participation. The number of academic credits needed for graduation became a paramount criterion because of the alternative nature of EBCE, specifically the need to maintain a student/faculty ratio

which would accommodate the tutorial nature of the program.

3. Selection. In addition to academic eligibility, several other considerations surfaced. First of all, the staff recognized the need to include equal representation of students from the participating high schools (at that time approximately 4 students per school). Another consideration was the availability of job sites for career interests identified by students. Other aspects considered were rate of school attendance, behavioral adjustment, and other subjective information included in the recommendations of the school staff. In essence, the 10 steps elaborated for student selection during the first year (see below) were refined and followed during the second year.

CRITERIA OF STUDENT SELECTION

1. Student voluntarily chooses the program.
2. Students are seniors.
3. Students need no more than five credits for graduation.
4. Students have no major conflicts in schedules.
5. Students complete an E.B.C.E. interest form.
6. Student has recommendation of his/her principal.
7. Student has recommendation of his/her guidance counselor.
8. Student has recommendation of his/her teachers.
9. Student has the consent of his/her parents.
10. E.B.C.E. sites meet the career interest of the student.

From an initial eligible pool of 53 students, 32 students were selected by the project staff for participation in the program. Those students not selected were placed on a waiting list for possible selection during January, 1978, as well as for replacement of students who were selected but eventually opted not to participate. A breakdown of the student participants by school is presented in the Data Collection Procedures section of Chapter II.

1st Semester. From approximately October 1 through December 31, 1977, the project staff analyzed the academic requirements, basic skills, and interests of the 32 students in order to develop individualized learning programs. After individualized activity-sheets were developed, the students began their placements in community sites. A list of these sites and the average time spent therein is presented in Chapter Three.

2nd Semester. Eight additional students were included as of January, 1978. Their community learning experiences are also included in Chapter Three.

The above information serves as a basic description of the structure and intended functions of the project during the most recent year of operation. Another component of the project should also be explained at this juncture of the report. As part of its responsibilities for 1977-78, RESA agreed to develop a plan for dissemination of the project to other school systems in Maryland. RESA recognized that this would be the first in a series of efforts to develop an EBCE network within the State to provide for the exchange of information, joint planning, and identity and direction for the local project.

More specifically, the dissemination phase sought to accomplish the following general objectives:

1. Utilize dissemination of program information and program outcomes using an administrative guide at the local level.
2. Identify and select additional implementation sites within the State of Maryland for the purpose of initiating EBCE.
3. Demonstrate and disseminate EBCE to educators and provide technical assistance and appropriate materials to selected LEA's and the remaining 17 Maryland counties (six counties had already been provided this service).

The dissemination component required the joint cooperation of the RESA Project Director, the Maryland State Department of Education (MSDE), and the Washington County Board of Education. The latter agency provided the facility for housing the state networking component. The State Networking Coordinator, a resident of Washington County, was given a leave of absence by the Board to coordinate this phase of the project. The Coordinator reported to The RESA, the primary funding agency, and to the MSDE, which also contributed funds towards this activity.

CHAPTER II

EVALUATION FORMAT

Purpose of the Evaluation

The purpose of the third-party evaluation is to determine the EBCE Project's success in meeting the stated goals and objectives outlined in the RESA Maryland Proposal. The evaluation report is addressed primarily to the administrators and coordinators responsible for its implementation at the local level. Primary attention is given to the priority objectives identified by the project administration during 1977-78. The basis for the assessment of each objective is the Evaluation Plan, which is modeled on the Management Plan.

Scope of the Evaluation

In order to focus on the varied dimensions of this Project, the evaluators have applied a Context, Input, Process, and Product (CIPP) evaluation model based on that developed by Daniel Stufflebeam.* This approach allows the evaluator to consider the interrelationship of procedural and intended elements with product and actual results. It stresses a systematic, cyclical approach in assessing a given project. Moreover, it provides a convenient framework for assimilating mutiple sources of data and relating these data to decision-making about major elements of a project.

The following paradigm** depicts the four elements of the CIPP model:

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*Daniel L. Stufflebeam, "Educational Evaluation and Decision-Making," in Blaine R. Worthen and James R. Sanders, Educational Evaluation: Theory and Practice (Worthington, Ohio: Charles A. Jones, 1973), pp. 128-142.

**Based on Stufflebeam, p. 135.

	INTENDED	ACTUAL
ENDS	(planning) CONTEXT	(recycling) PRODUCT
MEANS	(structuring) INPUT	(implementing) PROCESS

Figure 2

In relation to administrative decision=making, "*context* evaluation serves planning decisions to determine objectives; *input* evaluation serves structuring decisions to determine project designs; *process* evaluation serves implementing decisions to control project operations; and *product* evaluation serves recycling decisions to judge and react to project attainments."*

More precisely, context evaluation aims at defining the operating context, identifying and assessing needs and opportunities, and diagnosing problems related to the needs and opportunities. Input evaluation analyzes system capabilities, input strategies, and implementation designs. Process evaluation identifies strengths and weaknessess in the procedural design and its implementation. Also, it maintains records about procedural events and activities. Product evaluation, the last phase of the cycle, produces outcome information and relates this information to objectives and to context, input, and process information.*

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*Stufflebeam, p. 136.

Based on the model, the evaluators have attempted a four-dimensional focus on the general EBCE program objectives by considering the decision-making implications for each of the objectives with respect to their context, input, process, and product dimensions. Thus, each objective (or Project aim) is analyzed from the standpoint of its origin, its design, its implementation, and its effects.

Specific Evaluation Design

The design for the evaluation consists of five parts: (1) establishing a set of goal areas categorizing primary parameters of the EBCE project; (2) identifying relevant data and information and determining the most appropriate sources; (3) selecting instruments for data gathering; (4) analyzing the data by means of statistical and non-statistical treatment; (5) and relating the results of the analysis to the goal areas.

The goal areas refer to several Project areas: (a) the general features of the project: community support, academic quality, programmatic effects, and (b) the organizational implementation of the Project. Under community support, the evaluators include such groups as employers, parents, and community advisory council members. Academic quality indicates the maintenance and/or enhancement of skills as determined by academic grades, performance criteria, and perceptions of key participants.

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*Stufflebeam, p. 139.

Under programmatic effects, the evaluators deal with fundamental outcomes related to the career education advancement of students. These outcomes include students' career attitudes, communication skills, critical reasoning abilities, employability, and occupational aspirations.

The organization domain of the Project refers to the administration and technical implementation as personified by the local Board of Education, RESA Maryland, Project director, Project staff, and other subsystems.

A third area assessed is the accomplishments of the Project in local, regional, and state dissemination.

Program Goals and Objectives and the Management Plan

The four goals and attendant objectives for the EBCE project are presented within the Management Plan. Pertinent activities, completion date, persons responsible, and comments follow each objective.

E.B.C.E.
1977-78 MANAGEMENT PLAN

GOAL STATEMENT A : Given the opportunity, time and funding, R.E.S.A. and the Board of Education of Allegany County will be able to provide for the overall operational management and support considerations for the E.B.C.E. prog

OBJECTIVE A-1 : Establish an E.B.C.E. Community Advisory Council that will facilitate program planning, governance, and community relations.

Objective/and Activity Code Number	DESCRIPTION	COMPLETION DATE	*RESPONSIBLE PERSON(S)	CO
Activity A-1; 1	Advisory Council will meet to facilitate program planning for 1977-78 school year.	9/29/77 1/26/78 4/27/78	PD, BOE, E.B.C.E. staff	
Activity A-1; 2	E.B.C.E. staff will review minutes and actions of the advisory council.	1/30/78 5/1/78	PD and E.B.C.E. staff	
Activity A-1; 3	The advisory council will plan a program for E.B.C.E. students.	5/78	PD, E.B.C.E. staff and AC	
Activity A-1; 4	Advisory council subcommittees will meet to establish direction for 1977-78.			Ongoin
	a. Follow-up--	12/77	PM, AC	
	b. Sites--	10/77		
	c. Membership---	9/29/77		
	d. Publicity--	12/15/77		
	e. Graduation Program---------------------------------------	4/78		

E.B.C.E.
1977-78 MANAGEMENT PLAN

GOAL STATEMENT A : Given the opportunity, time and funding, R.E.S.A. and the Board of Education of Allegany County will be able to provide for the overall operational management and support considerations for the E.B.C.E. prog

OBJECTIVE A-2: Develop and refine a management plan for each year's operation based upon staff input and formative evaluation data that provides for the accomplishment of the four major area goals herein defined.

Objective/and Activity Code Number	DESCRIPTION	COMPLETION DATE	*RESPONSIBLE PERSON(S)	COM
Activity A-2; 1	A system of program monitoring and management will be established by R.E.S.A. and B.O.E. (e.g., management responsibilities, accounting and reporting procedures).	10/77	PD, PM, WVU, and BOE	Ongoin
Activity A-2; 2	The third-party evaluation plan will be developed and finalized for second-year operation.	10/77	PD and WVU	
Activity A-2; 3	E.B.C.E. program will receive on loan from the B.O.E. equipment and materials to implement the project.		PD and BOE	Ongoin
Activity A-2; 4	A management plan for second-year operation will be developed and finalized.	10/77	PD, PM, and WVU	
Activity A-2; 5	The budget will be reviewed for program year 1977-78.	9/77	PD, PM and PS	
Activity A-2; 6	The budget for third-year funding will be developed.	2/78	PD, BOE, and PM	
Activity A-2; 7	Inventory all E.B.C.E. materials/equipment on loan from B.O.E.	1/78 6/78	PM, PS	
Activity A-2; 8	A task force will be established to develop alternative strategies for normalizing the E.B.C.E. program in the Allegany County curriculum.			Ongoin

E.B.C.E.
1977-78 MANAGEMENT PLAN

GOAL STATEMENT A : Given the opportunity, time and funding, R.E.S.A. and the Board of Education of Allegany County will able to provide for the overall operational management and support considerations for the E.B.C.E. pr

OBJECTIVE A-2 : Develop and refine a management plan for each year's operation based upon staff input and formative evaluation data that provides for the accomplishment of the four major area goals herein defined.

Objective/and Activity Code Number	DESCRIPTION	COMPLETION DATE	*RESPONSIBLE PERSON(S)	CO
	*Code: PD - Regional Education Service Agency, Project Director BOE - Board of Education of Allegany County Liaison AC - Advisory Council SNC - State Networking Coordinator WVU - Third-Party Evaluation (West Virginia University) SMC - State Management Committee EBCE Staff PM - Project Manager SA - Site Analyst LC - Learning Coordinators (2) PS - Project Secretary AC - Associate Counselor (In-Kind)			

E.B.C.E.
1977-78 MANAGEMENT PLAN

GOAL STATEMENT B : Given the opportunity, time and funding, R.E.S.A. and the Board of Education of Allegany County will able to adapt and implement the content and process of student learning in the second year (4 in each 6 high schools); and 32 students the second year (4 in each of 8 high schools). During the third yea the number of students will be determined based on a cost-effective standard.

OBJECTIVE B-3 : Adapt and implement an instructional program which correlates learning activities in the community wi program defined Basic Skills and Career Development. Program activities will address decision-making skills, career attitudes, employability, sex-stereotyping and discrimination and career maturity.

Objective/and Activity Code Number	DESCRIPTION	COMPLETION DATE	*RESPONSIBLE PERSON(S)	C(
Activity B-3; 1	Identify each student's needs for graduation requirements.	9/77	PM and BOE	
Activity B-3; 2	Students and staff negotiate learning goals, activities, performance criteria and resources commensurate with each student's identified needs and expressed interests.		LC	Ongo
Activity B-3; 3	Assist each student in designing a learning plan which meets learning and developmental goals using program learning strategies.		LC	Ongo
Activity B-3; 4	Students will be provided the opportunity to be exposed to multiple experience sites.		SA	Ongo
Activity B-3; 5	Students will be provided the opportunity to participate in seminars (e.g., Title IX).	10/31; 11/28; 12/19; 1/23; 2/27; 3/20; 2/24; 5/22	PM, E.B.C.E. staff	
Activity B-3; 6	The school principals and guidance counselors will be provided feedback on students' progress on a quarterly basis	11/14/77; 2/3/78; 4/17/78; 6/15/78	LC	
Activity B-3; 7	Parent conference day will be provided for all students and parents.	11/16/77; 2/6/78 4/20/78	E.B.C.E. staff and BOE	

E.B.C.E.
1977-78 MANAGEMENT PLAN

GOAL STATEMENT B : Given the opportunity, time and funding, R.E.S.A. and the Board of Education of Allegany County will b able to adapt and implement the content and process of student learning in E.B.C.E. for approximately 24 students the first year (4 in each of 6 high schools); and 32 students the second year (4 in each o 8 high schools). During the third year, the number of students will be determined based on a cost-effective standard.

OBJECTIVE B-3 : Adapt and implement an instructional program which correlates learning activities in the community wit program defined Basic Skills and Career Development. Program activities will address decision-making skills, career attitudes, employability, sex-stereotyping and discrimination and career maturity.

Objective/and Activity Code Number	DESCRIPTION	COMPLETION DATE	*RESPONSIBLE PERSON(S)	CO
Activity B-3; 8	E.B.C.E. students will graduate from home high school.	6/78	E.B.C.E. staff and BOE	

E.B.C.E.
1977-78 MANAGEMENT PLAN

GOAL STATEMENT C : Given the time, opportunity, and funding, R.E.S.A. and the Board of Education of Allegany County and project's independent evaluator will establish procedures for gathering, analyzing and reporting dat relating to program outcomes. Specifically addressed will be student outcome goals and objectives a process goals and objectives.

OBJECTIVE C-1 : Develop and implement an evaluation design that provides for student outcome evaluation, process eva and summative evaluation. This design will correspond to the management plan.

Objective/and Activity Code Number	DESCRIPTION	COMPLETION DATE	*RESPONSIBLE PERSON(S)	
Activity C-1; 1	Coordinate plans for State-Networking of E.B.C.E. with Maryland State Department of Education	10/4/77	SNC, PD and WVU	Ong
Activity C-1; 2	Complete Third-Party Evaluation Report (1976-77 Project Year).	10/15/77	WVU	
Activity C-1; 3	Finalize Evaluation Design based on this year's management plans.	10/15/77	PD, BOE and WVU	
Activity C-1; 4	Analyze and report for diagnostic purposes the results of the pretests.	10/30/77	WVU	
Activity C-1; 5	Assist networking staff in demonstrating Allegany County E.B.C.E. to State Networking Management Group.	11/1-2/77	PD and WVU	Ong
Activity C-1; 6	Share the conclusions and recommendations of First-Year Evaluation with R.E.S.A., B.O.E., C.A.C., schools, and other interested parties.	11/15/77	WVU	
Activity C-1; 7	Complete questionnaire for follow-up of first-year students.	12/31/77	PD and WVU	
Activity C-1; 8	Interview second-year E.B.C.E. students.	1/15/78	WVU	

E.B.C.E.
1977-78 MANAGEMENT PLAN

GOAL STATEMENT C : Given the time, opportunity, and funding, R.E.S.A. and the Board of Education of Allegany County and project's independent evaluator will establish procedures for gathering, analyzing and reporting data relating to program outcomes. Specifically addressed will be student outcome goals and objectives an process goals and objectives.

OBJECTIVE C-1 : Develop and implement an evaluation design that provides for student outcome evaluation, process eval and summative evaluation. This design will correspond to the management plan.

Objective/and Activity Code Number	DESCRIPTION	COMPLETION DATE	* RESPONSIBLE PERSON(S)	CO
Activity C-1; 9	Interview resource persons and E.B.C.E. staff for interim findings.	2/1/78 —	WVU	
Activity C-1; 10	Complete Interim Report of Allegany County E.B.C.E. and networking efforts.	3/1/78 —	WVU	
Activity C-1; 11	Posttest and follow-up interviews with E.B.C.E. students.	5/31/78	WVU	
Activity C-1; 12	Complete third-party evaluation contract for program year 1978-79.	5/78	PD, BOE and WVU	
Activity C-1; 13	Conduct all other interviews and data gathering.	6/15/78	WVU	
Activity C-1; 14	Send out questionnaire second time to 1977-78 E.B.C.E. students.	6/30/78	WVU	
Activity C-1; 15	Compile and analyze all information about entire E.B.C.E. project.	7/30/78	WVU	
Activity C-1; 16	Discuss draft of second year Evaluation Report.	9/30/78	PD, BOE, and WVU	
Activity C-1; 17	Complete Evaluation Report.	10/15/78	WVU	
Activity C-1; 18	Finalize evaluation design based on 1978-79 Mngt. Plan.	10/78	PD, BOE, PM, SNC, and WVU	

E.B.C.E.
1977-78 MANAGEMENT PLAN

GOAL STATEMENT D : Given the opportunity, time and funding, M.S.D.E., R.E.S.A., and the Board of Education of Allegany Co will develop alternative strategies for demonstration and dissemination of E.B.C.E. to educational personnel throughout Appalachian Maryland and the remainder of the State.

OBJECTIVE D-1 : Demonstrate and disseminate E.B.C.E. to educators and provide technical assistance and appropriate materials to L.E.A.'s and other educational agencies desiring to implement E.B.C.E.

Objective/and Activity Code Number	DESCRIPTION	COMPLETION DATE	*RESPONSIBLE PERSON(S)	CO
Activity D-1; 1	Conduct meetings with principals, counselors and supervisors regarding the E.B.C.E. program.		E.B.C.E. staff	Ongoi
Activity D-1; 2	Conduct public relations for the E.B.C.E. program.		PM, BOE, PD, and E.B.C.E. staff	Ongoi
Activity D-1; 3	Project participation on performance review team for evaluation of E.B.C.E. project in other State Part D site.		PD	
Activity D-1; 4	Conduct upon request of an L.E.A., or the Management Committee, meetings throughout the State of Maryland concerning E.B.C.E. applicability and implementation at the local level.	through 9/30/78	State Net-working Coordinator (SNC)	Ongoi
Activity D-1; 4a	Conduct Career Education Seminar for State Management Comm.	11/1/77	SNC	
Activity D-1; 4b	Meet with Directors of Instruction for State L.E.A.'s.	11/15/77	SNC	
Activity D-1; 5	Speak to, upon request and direction from the State Management Committee, civic groups, including but not limited to Business, Industry, Labor and Professions.	through 9/30/78	SNC, SMC	Ongo
Activity D-1; 5a	Present at the Maryland State Conference on Career Education.	10/14/77	SNC	

E.B.C.E.
1877-78 MANAGEMENT PLAN

GOAL STATEMENT D : Given the opportunity, time and funding, M.S.D.E., R.E.S.A., and the Board of Education of Allegany C will develop alternative strategies for demonstration and dissemination of E.B.C.E. to educational personnel throughout Appalachian Maryland and the remainder of the State.

OBJECTIVE D-1 : Demonstrate and disseminate E.B.C.E. to educators and provide technical assistance and appropriate materials to L.E.A.'s and other educational agencies desiring to implement E.B.C.E.

Objective/and Activity Code Number	DESCRIPTION	COMPLETION DATE	*RESPONSIBLE PERSON(S)	CC
Activity D-1; 5b	Attend and present at the National Ad Hoc Committee for E.B.C.E.	11/3/77 11/4/77	SNC	
Activity D-1; 6	Provide a liaison function to the State Management Committee and the State Networking component in the area of public relations activities.	through 9/30/78	SNC	Ongo
Activity D-1; 6a	Meet with Manpower, L.E.A.'s, and local C.E.T.A. Prime Sponsors, concerning the new Youth Employment Act, and its applicability to E.B.C.E. programs and other alternative programs.	10/31/77	SNC	Ongo
Activity D-1; 6b	Meet with Western Maryland Consortium as liaison and advisor, concerning State priorities and L.E.A. participation under new C.E.T.A. legislation.	11/8/77	SNC	Ongc
Activity D-1; 6c	Meet with U.S.O.E. Commissioner of Career Education.	11/16/77	SNC	
Activity D-1; 6d	Present to the Maryland R.E.S.A. possibilities for funding and implementation of E.B.C.E. programs for handicapped programs and research.	11/17/77	PD and SNC	
Activity D-1; 6e	Meet with N.I.E. (13 states developing state strategies for networking).	11/18/77	SNC	

E.B.C.E.
1977-78 MANAGEMENT PLAN

AL STATEMENT D : Given the opportunity, time and funding, M.S.D.E., R.E.S.A., and the Board of Education of Allegany Co will develop alternative strategies for demonstration and dissemination of E.B.C.E. to educational personnel throughout Appalachian Maryland and the remainder of the State.

JECTIVE D-1: Demonstrate and disseminate E.B.C.E. to educators and provide technical assistance and appropriate materials to L.E.A.'s and other educational agencies desiring to implement E.B.C.E.

jective/and ctivity Code Number	DESCRIPTION	COMPLETION DATE	*RESPONSIBLE PERSON(S)	CO
tivity D-1; 7	Participation of SNC and State Management Committee on performance review of networking project involving Part D funds.	4/78	SNC, SMC, and PD	
tivity D-1; 8	Initiate Strategies for continued funding through participation with R.E.S.A., State Department of Education, and various U.S.O.E. sources, including C.E.T.A., Youth Employment Act, handicapped youth, etc. for 1978-79.	4/78	PD and SNC	
tivity D-1; 9	Present joint networking proposal to all involved agencies.	4/78	PD and SNC	
tivity D-1; 10	Continue the cooperative agreement for dissemination of E.B.C.E. in the State of Maryland, which will include R.E.S.A., N.I.E., Maryland State Department of Education, Vocational Division and the Maryland State Department of Education Division of Instruction.	8/78	SNC and RESA	
tivity D-1; 11	Prepare and conduct a State Management Committee Meeting on a monthly basis.	through 9/30/78	PD and SNC	Ongo
tivity D-1; 12	Disseminate local project implementation and progress and possibilities for state networking to L.E.A.'s special interest groups and appropriate agencies.	through 9/30/78	PD and SNC	Ongc

1977-78 E.B.C.E. MANAGEMENT PLAN

OAL STATEMENT D : Given the opportunity, time and funding, M.S.D.E., R.E.S.A., and the Board of Education of Allegany C will develop alternative strategies for demonstration and dissemination of E.B.C.E. to educational personnel throughout Appalachian Maryland and the remainder of the State.

BJECTIVE D-2 : Provide dissemination of program information and program outcomes to L.E.A.'s and institutions of higher learning and other interested educational agencies.

bjective/and ctivity Code Number	DESCRIPTION	COMPLETION DATE	*RESPONSIBLE PERSON(S)	CO
ctivity D-2; 1	Prepare quarterly and interim reports in compliance to federal guidelines.	9/30/78	PD, PM and SNC	Ongoi
ctivity D-2; 2	Prepare for on-site review by U.S.O.E. for E.B.C.E. project.	2/78	PD, BOE, and E.B.C.E. staff	
ctivity D-2; 3	Present E.B.C.E. program to interested state personnel.	11/1/77 and 11/2/77	PD, BOE, PM and E.B.C.E. staff	Ongoi
ctivity D-2; 4	Provide a weekly and monthly schedule of activities and progress to the State Management Committee and E. Niel Carey relating to the state networking component of E.B.C.E.	9/30/78	SNC	
ctivity D-2; 5	Conduct on-site visitations by State Department of Education personnel, Federal Government (U.S.O.E., N.I.E., O.C.E.) personnel from other states and Maryland.	9/30/78	SNC and PD	
ctivity D-2; 6	Serve on Ad Hoc National Task Force on E.B.C.E. and complete tasks as assigned by Chairperson, and agreed upon by the Networking Coordinator and State Management Committee.	9/30/78	SNC	

E.B.C.E.
1977-78 MANAGEMENT PLAN

GOAL STATEMENT D : Given the opportunity, time and funding, M.S.D.E., R.E.S.A., and the Board of Education of Allegany Co will develop alternative strategies for demonstration and dissemination of E.B.C.E. to educational personnel throughout Appalachian Maryland and the remainder of the State.

OBJECTIVE D-2 : Provide dissemination of program information and program outcomes to L.E.A.'s and institutions of higher learning and other interested educational agencies.

Objective/and Activity Code Number	DESCRIPTION	COMPLETION DATE	*RESPONSIBLE PERSON(S)	CO
Activity D-2, 6a	Chair subcommittee to survey and report needs for National Clearinghouse and E.B.C.E. directory.	9/30/78	SNC	
Activity D-2; 6b	Chair subcommittee to meet and disseminate information to Commissioner of Career Education and newly appointed Director of N.I.E. concerning national networking of E.B.C.E. concept.	9/30/78	SNC	
Activity D-2; 7	Establish communications with institutions of higher education for implications of the E.B.C.E. concept as it relates to research questions concerning the provision of E.B.C.E. for the handicapped and other target populations.	through 9/30/78	SNC, PM and PD	
Activity D-2; 7a	Investigate and develop proposal applications at the Federal and State level, specifically Special Education (handicapped) and Career Education.	1/78	SNC and PD	
Activity D-2; 8	Seek other funding sources which may have a relation to E.B.C.E. networking, C.E.T.A., Project BASIC, Vocational Education, Special Education and other appropriate federal titles.			Ongoi
Activity D-2; 9	Disseminate information to L.E.A. Superintendents and staff in the State of Maryland concerning timetable for funding, training and implementation of E.B.C.E.			Ongoi

E.B.C.E.
1977-78 MANAGEMENT PLAN

GOAL STATEMENT D : Given the opportunity, time and funding, M.S.D.E., R.E.S.A., and the Board of Education of Allegany Co will develop alternative strategies for demonstration and dissemination of E.B.C.E. to educational personnel throughout Appalachian Maryland and the remainder of the State.

OBJECTIVE D-3 : Identify and select implementation sites within the State of Maryland for the purpose of initiating E.B.C.E.

Objective/and Activity Code Number	DESCRIPTION	COMPLETION DATE	*RESPONSIBLE PERSON(S)	CO
Activity D-3; 1	Work with the assigned lead lab (A.E.L. - Charlestown, West Virginia) to organize a timetable and establish specific dates, and acquire competent training technical assistance for potential state networking E.B.C.E. trainees.	11/30/77	SNC	
Activity D-3; 2	Conduct regional training workshops for L.E.A. and State Management Committee personnel for the purpose of identifying and selecting school systems for implementation of E.B.C.E. in the State of Maryland.	12/77	SNC	Ongoi
Activity D-3; 2a	Conduct one-day workshop in Frederick region. Orientation to four models and the adaptation for use in the Maryland model.	12/5/77	SNC	
Activity D-3; 2b	Conduct one-day workshop in Easton, Maryland area.	12/9/77	SNC	
Activity D-3; 3	Develop in accordance with state strategy guidelines from N.I.E. for establishing E.B.C.E. state networking projects a training program for selected Management Committee members and possible L.E.A. staffs with the assistance of the lead lab.			Ongo
Activity D-3; 4	Make final selection with a minimum of six L.E.A.'s for implementation of Maryland model for E.B.C.E. program.	2/78	SNC	
Activity D-3; 5	Establish and service, through regular visitations, the selected school systems.	through 9/30/78	SNC	afte plem tion

Evaluation Model

On the basis of analyzing the stated goals and objectives of the project, the third-party evaluators designed an evaluation model detailing the general area to which selected objectives pertain, target research questions, instrument, design, effectiveness criteria, and primary data source. The reader should keep in mind that the target questions are cross-referenced to one or more of the objectives detailed in the Management Plan.

Goal Areas	Target Questions	Instrument	Design	Effectiveness Criteria	Primary Data Source
A. Community Support	1. To what degree did the community support the EBCE Project?	1. Interviews 2. Questionnaires 3. Extant Project Records	1. Summary Analysis of Interviews. 2. Frequency of Response of Questionnaire items 3. Summary analysis of Project Records.	1. Consensus of interviewees. 2. X Likert Response above 3.5. 3. Corroborating, subjective evidence in Project Records.	1. EBCE staff 2. (a) Employers (b) Parents 3. (a) Community Advisory Council Records (b) Student Site Placements (c) PR Materials
	2. Did the Community consider the Project to be worthwhile and effective?	1. Questionnaire	1. Frequency of Response of Questionnaire items.	1. $\bar{X}$ Likert Response above 3.5.	1. (a) Employers/ Resource Persons (b) Parents
B. Academic Program Classroom and Community Learning	1. Did the EBCE students maintain academic skills?	1. CTBS Battery 2. Interviews 3. Questionnaires	1. Pre-Post Gains comparison to national norms. 2. Summary analysis of Interviews. 3. Frequency of Response of Questionnaire items.	1. Percentile and stanine comparisons should increase. 2. Consensus of Interviewees. 3. X Likert-Response above 3.5.	1. Student Tests 2. (a) Learning Coordinators (b) Students 3. (a) parents (b) students (c) employers

Goal Area	Target Questions	Instrument	Design	Effectiveness Criteria	Primary Data Source
B. Academic Program Continued	2. Did the students increase their motivation to learn and achieve through their participation in EBCE?	Questionnaires.	1. Frequency of Response of Questionnaire items.	1. $\bar{X}$ Likert-Response above 3.5.	1. (a) Students (b) parents
	3. Were alternative learning opportunities provided for students in non-traditional occupational roles to reduce sex stereotyping?	1. Available Project records. 2. Interviews	1. Summary Analysis of Records. 2. Summary Analysis of Interviews.	1. Corroborating evidence in Project records. 2. Consensus of Interviewees.	1. LC records and Project Director records. 2. LC's
	4. Did the EBCE Project provide the students with the personal skills required to make effective career decisions?	1. Career Decision Making Skills Test (7 parts).	1. Pre-Post Comparisons	1. Positive group gains in pre-post results	1. EBCE Students

Goal Area	Target Questions	Instrument	Design	Effectiveness Criteria	Primary Data Source
B. Academic Program Continued	5. Did the Project provide students with Employment Seeking Skills?	1. Employment Seeking Skills Test (5 parts).	1. Pre-Post test comparisons.	1. Positive group gains in pre-post results.	1. EBCE Students
	6. Did the Project enhance the employability of each student?	1. Questionnaires. 2. Initial follow-up of EBCE graduates.	1. Frequency of Response on Questionnaire items. 2. Analyze Follow-up data for number of students finding employment.	1. $\bar{X}$ Likert Response above 3.5. 2. At least 50% of those students not planning to attend post-secondary institutions will find employment.	1. (a) Students (b) Parents 2. 24 EBCE students
D. Dissemination and Replicability*	1. At the local level were the primary audiences adequality informed about the Project?	1. Questionnaires. 2. Interviews	1. Frequency of Response of Questionnaire items. 2. Summary analysis of Interviewees' responses.	1. $\bar{X}$ Likert Response above 3.5. 2. Consensus of response.	1. (a) RESA (b) BOE (c) Project Director (d) Employees

* Goal area "C" contains the evaluation objectives.

Goal Area	Target Questions	Instrument	Design	Effectiveness Criteria	Primary Data Source
D. Dissemination and Replicability Continued	2. At the state, regional, and national level were the primary audiences adequately informed about the Project?	1. Project records	1. Summary Analysis.	1. Information provided clearly and regularly to intended audiences.	1. (a) Maryland State Department of Education (b) RESA
	3. Were efforts made to extend EBCE to other school systems in the State of Maryland?	1. Interviews	1. Summary Analysis.	1. Consensus of Responses	1. (a) RESA (b) SN Coordinator (c) MSDE
	4. Were efforts made to plan for the future direction of the Project as an integral component of the local school system?	1. Interviews	1. Summary Analysis.	1. Consensus of responses	1. (a) Principals (b) RESA (c) BOE (d) Project Director (e) CAC

Data Collection Procedures

The evaluators collected pertinent data about the progress of the project during three critical phases. In September, 1977, the EBCE students were pre-tested in the Comprehensive Test of Basic Skills (CTBS) and in the Career Decision-Making and Employment Seeking Skills. During this phase of the 1977-78 project, 32 students representing seven public and one parochial school participated in the pre-testing.

Students Pre-tested	School
6	Allegany
3	Beall
4	Bishop Walsh
4	Bruce
4	Flintstone
3	Fort Hill
4	Oldtown
4	Valley
Total 32	

The second phase of student data gathering took place during December, 1977. At that time, a 33 question interview guide was administered to 27 students currently participating in the EBCE programs.* Twenty-four (24) of the questions asked them to rate on a 5-point Likert scale (5.0 = high) different aspects of their experience in the first half year of the EBCE program. Nine (9) questions sought specific information, i.e. number of site placements, most and least satisfying activities, hours per week with the LC, hours per week at site, quality of counseling services, and availability of learning materials.

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* Five students were unable to attend this seminar.

A first year student follow-up questionnaire was developed and mailed to the 23 students who completed the first year in the EBCE project. The purpose of the questionnaire was to determine their present status and its relationship to participation in the EBCE project. Eighteen (18) of the twenty-three (23) students (78%) returned their questionnaires. The Questionnaire contained six items which allowed them to look in retrospect at their EBCE experience.

The third phase occurred from May to September, 1978 and included the administering of post-tests in the CTBS and Career Decision-Making and Employment Seeking batteries to the same number of EBCE students represented in the pre-testing phase. In addition, interviews and questionnaires were administered to project staff, resource personnel, and parents. The questionnaires allowed for scoring by means of a frequency distribution of Likert interval responses. Interviews where possible were analyzed through summary response techniques, identifying consensus responses and noting significant "minority" opinions.

Documentary Search and Analysis of Pertinent Records. The following documents and records related to the Project were analyzed as they might yield significant supplementary information about its overall progress and development:

Site Placement Opportunities
Student Sites Selected
Community Advisory Council Minutes
Steering Committee Minutes
Quarterly Reports
Learning Coordinator Records
Budget Information
Initial Student Follow-Up
Calendar of Events
Project Publicity
Project Dissemination Records

Tests

In order to obtain a reliable measure of the students' knowledge of basic skills, the evaluators administered the Comprehensive Test of Basic Skills (CTBS), Form S, Level 4. Four sub-tests of the CTBS were administered on a pre-test and post-test basis for both diagnostic as well as evaluative purposes: Reading Comprehension, Mathematics Concepts and Application, Science, and Social Studies. Thirty-two EBCE students were pre-tested in September 1977.* The tests were scored immediately, and the results were reported to the local project staff for use in curriculum planning and structuring learning activities in light of individual achievement strengths and weaknesses.

The complete battery of the CTBS contains tests in six basic skill areas: Reading, Language, Mathematics, Reference Skills, Science, and Social Studies. The six areas are divided into ten separately times tests. As indicated earlier, the EBCE students were given four of these tests. All the items in these tests are multiple-choice. All items in Form S, Level 4 have four alternatives. The specific nature of each of the four tests is as follows:

--Reading Comprehension. This test contains 45 items based on seven reading selections. Some reading passages portray feelings and situations universally experienced by young people; other passages present enriching informative material. The test items measure specific skills in both literal and critical comprehension. More than two-thirds of the items in this test measure skills in critical comprehension

--Mathematics Concepts and Applications. The 50 items in this test measure the student's ability to recognize concepts, choose appropriate problem-solving operations, and carry out such operations. The 25 concept items measure the student's ability to convert concepts expressed in one numerical, verbal, or graphic form to another form, and to comprehend numerical concepts and their interrelationships. The content categories for the concept items include number systems, measurement, set theory, geometry, graphs, numeration, and problem solving.

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*One student did not complete the Reading Comprehension sub-test because he arrived late at the testing site.

The 25 applications items measure the student's ability to select and carry out problem-solving operations. The content categories for these times include number systems, measurement, percentages, and reasoning. Separate scores are reported for each section.

--Science. This test comprises 40 items which assess the student's ability to investigate problems in science and, to a lesser degree, to recall scientific facts or concepts. Investigative skills measured are the abilities to classify objects or phenomena, to measure or quantify data, to recognize a trend in data, to predict the outcome of a trend in data, to recognize a valid hypothesis drawn from data presented, and to analyze an experimental design. The student demonstrates these skills by interacting with data presented in charts, diagrams, drawings, graphs, and written passages. The items are distributed across the various content areas of the physical and life sciences.

--Social Studies. The 39 items in this test measure the student's grasp of concepts, generalizations, and inquiry skills necessary for effective problem solving in social studies. These skills are tested in settings drawn from four content areas: the physical environment, the social environment, the political/economic environment, and history. The student is required to recall specific information, to read maps and other graphic material, to interpret verbal material, to select and evaluate research designs, to distinguish fact from opinion, and to employ formal logic in problem solving.*

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*Examiner's Manual, Expanded Edition of CTBS, pp. 4-5.

Raw scores for each test are converted to percentile ranks and stanines. Different testing times are taken into account in the conversion of raw scores by means of separate time norms (e.g. September vs. May).

In addition to the CTBS Test for academic achievement, the evaluators administered two experimental editions of career education tests developed by the Career Skills Assessment Program of the College Entrance Examination Board, an affiliate of the Educational Testing Service, Princeton, New Jersey. The tests were designed to measure Employment Seeking Skills and Career Decision-Making Skills.

The Employment Seeking Skills Test was scored in five categories:

1. Anticipating job prospects, 13 questions;
2. Finding out and interpreting facts and sources of information about available jobs, 23 questions;
3. Identifying appropriately written letters, resumés, and applications for potential employers, 18 questions;
4. Describing appropriate behavior and appearance as one if interviewed and evaluated for a job, 9 questions; and
5. Evaluating when a specific job fits a person's needs and interests, 7 questions.

The Career Decision-Making Skills Test was scored in seven categories:

1. Defining the problem, 4 questions;
2. Establishing an action plan, 11 questions;
3. Clarifying values, 9 questions;
4. Identifying alternatives, 9 questions;
5. Discovering probable outcomes, 16 questions;
6. Eliminating alternatives systematically, 7 questions; and
7. Starting action, 4 questions.

A total score was computed for all items as well as by individual categories (e.g. anticipating job prospects) for each student and the EBCE group. The scores of the 25 students who took the pre-test were matched with an equal number who took the post-test.

The reader is reminded that this battery is an experimental instrument for which norms have not yet been established; however, in the judgement of the evaluator, the context of the instrument is very appropriate to the unique aims and product objectives of the Allegany County EBCE Project, and its use seems warranted on primarily that basis.

Relating Data to Goal Areas

The results of the data analyses are referenced to the goal areas by means of Target Questions. These questions translate the Project Objective into quantifiable statements and probe the central features of each goal area.

The format for the remainder of this report follows the logical sequence of presenting findings about the effectiveness of the Project (Chapter III), and providing formative recommendations to the local Project Administrators for the improvement and continuation of the EBCE Project in Allegany County, Maryland (Chapter IV).

CHAPTER III

PROJECT EFFECTIVENESS

By means of target questions that analyze the goal areas, the evaluators assessed the central strengths and weaknesses of the EBCE Project. Specific answers to each target question indicate specific conclusions by the Evaluator. At the end of this section, general conclusions are presented in a summary fashion.

Goal Areas and Questions

Three goal areas were established for extensive evaluation. Specific conclusions for the target questions related to the goal areas are supported by means of accompanying data tables and data summaries. Complete presentations of all data collected are contained in the Appendix Section.

A. COMMUNITY SUPPORT

Question 1: To what degree did the Community support the EBCE Project?

On the basis of scanning extant records of community support as registered by the Community Advisory Council, Employer Sites, and EBCE staff perceptions, it is apparent that the EBCE Project produced substantial support from the community. Most impressive are the number and variety of sites (now over 200) made available to the participating students. All but one career cluster (Marine Science) was represented, and efforts appear to have been made to obtain as many appropriate work experiences as possible, given the limitations of time and space. The career clusters are depicted below as identified by the Department of Labor. Each career cluster is numbered for ease of reference in subsequent data analysis.

Career Clusters

1. Agri-Business & Natural Resources
2. Business & Office
3. Communication & Media
4. Consumer & Homemaker
5. Construction
6. Environment
7. Fine Arts & Humanities
8. Health Occupations
9. Hospitality & Recreation
10. Manufacturing
11. Marine Science
12. Market & Distribution
13. Personal Service
14. Public Service
15. Transportation

The evaluators obtained a list of the number of experiences which the students engaged in for each of the career clusters. This information is detailed in the table below in addition to the average time spent in each experience by weeks as well as the status of that experience from the standpoint of its being non-traditional (for use later under Goal B, Question 3).

Table 1

Students' Career Experiences at Community Sites by Occupational Clusters, Number of Experiences, Average Duration, and Non-Traditional Experience (NTE)

Student	Career Cluster	# of Experiences	Average Duration in weeks per Experience	# of NTE in O.C.
1	13	3	6	0
	8	2	5	0
	3	1	3	0
2	5	3	4	0
	15	3	4	0
	14	1	3	0
3	2	2	7	0
	9	2	5	0
	10	1	8	1
4	12	3	6	0
	15	3	3	0
	1	1	4	0
	3	1	4	0
5	8	4	4	1
	13	1	2	0
6	10	2	9	0
7	14	5	6	3
	13	1	3	0
8	12	1	6	0
9	4	1	4	0
	9	1	4	0
	13	1	4	0
10	8	3	5	0
	12	1	4	0
	15	1	13	0
11	12	2	9	1
	2	1	4	0
	9	1	3	0
	14	1	9	0

Table 1 continued

Student	Career Cluster	# of Experiences	Average Duration in weeks per Experience	# of NTE in O.C.
12	14	4	5	2
	8	2	7	0
	13	1	2	0
13	8	6	5	0
	2	1	5	0
14	4	3	3	0
	13	2	6	0
	8	1	8	0
15	8	2	4	0
	14	2	6	1
	2	1	4	0
	4	1	7	0
	9	1	4	0
16	14	2	3	0
	1	1	3	0
	4	1	4	0
	6	1	2	1
	8	1	9	0
17	8	2	7	0
	2	1	8	0
	10	1	8	0
	15	1	3	1
18	7	2	6	1
	1	1	4	0
19	3	1	6	0
	4	1	4	0
	8	1	13	0
20	10	2	13	0
	12	1	4	0
	14	1	4	0
21	13	3	5	0
	3	1	4	0
	9	1	2	0
	14	1	8	0
22	10	1	13	0
	12	1	3	0

Table 1 continued

Student	Career Cluster	# of Experiences	Average Duration in weeks per Experience	# of NTE in O.C.
23	4	2	4	0
	1	1	13	0
	12	1	4	0
24	12	3	7	1
	1	1	6	0
	3	1	4	0
25	14	5	6	1
26	14	3	5	0
	3	2	9	0
27	4	1	4	0
	6	1	4	0
	10	1	10	0
28	2	3	6	0
	13	1	7	1
	14	1	4	0
29	14	3	8	1
	2	1	2	0
	9	1	8	0
30	1	2	11	0
	7	1	3	0
	10	1	2	0
	12	1	6	0
	15	1	1	0
31	5	2	7	2
	7	1	5	0
32	8	4	7	0
33	5	4	5	0
	12	1	8	0
	14	1	4	0
34	2	1	2	0
	5	1	13	0
	12	1	3	0

Table 1 continued

Student	Career Cluster	# of Experiences	Average Duration in weeks per Experience	# of NTE in O.C.
35	8	1	5	0
	10	1	4	0
	12	1	4	0
36	8	3	6	1
	1	1	5	0
	6	1	4	0
	12	1	4	0
37	1	3	5	0
	14	2	7	0
38	14	4	6	0
	6	1	2	0
	13	1	4	0
39	8	2	4	0
	12	1	6	0
	14	1	4	0
40	8	2	7	0
	4	1	13	0
	9	1	6	0

The continued development of the Community Advisory Council (CAC) is a second index to the acceptable level of Community support for EBCE. Composed of 35 representatives of business, industry, and education, the CAC met four times during the year. The membership and leadership remained constant over the second year, and as the minutes of this group make manifest (see appendix), the CAC contributed an even greater amount of support and guidance for the project during 1977-78.

More extensive support in the form of direct involvement in planning and developing EBCE by the CAC was evidenced by their contributions to the Task Force for continuation beyond federal funding.

It is evident as well from the responses of the employers and the parents that extensive local support was marshaled on behalf of EBCE. The responses of the employers are presented below along with the mean Likert rating for each pertinent item.

Do you talk about job opportunities?	3.32
Do you talk about activities at your site?	3.74
Do you evaluate individual students' assignments?	3.74
Do you talk about goal aspirations?	3.05
Do you talk about career aspirations?	2.95
Do you assist students in non-job related assignments?	1.84
Do you sppervise students to perform a specific job-related task at your site?	3.63
Do you help plan student assignments?	3.84

Most of the responses exceed the 3.5 criterion; however, the issues of goal aspirations, career aspirations, and non-job related assignments fall below this expected level, suggesting that these activities receive less emphasis than they should at the career sites.

More importantly, the employees and top-level management at the sites endorsed the program and have reacted very favorably to the students as witnessed by the Likert responses of 4.16 and 3.79, respectively.

How have the majority of employees at your site reacted to the EBCE students placed at your site?	4.16
How has top level management reacted to the EBCE students placed here?	3.79

The interview responses of the parents (N=24) indicate an equally high level of support for the EBCE endeavor. Almost without exception, they valued the program for its unique career components and considered it to be more relevant than the traditional school program in light of their children's needs and aspirations.

Question 2: From the standpoint of Employers and Resource Persons, did the Community consider the Project to be worthwhile and effective?

Based on a 1-5 Likert-scale, the Employers and Resource Persons rated the project as effective (4.05). Also, the majority of employees at the sites reacted very favorably to the EBCE students (4.16). Top level management exhibited an equally favorable attitude toward the Program (3.79).

In their support of EBCE, the Employers gave the Program credit for the following benefits to their company:

EBCE improved the quality of work performed by regular employees.

EBCE had a positive influence on the amount of work performed by regular employees.

EBCE had a little positive impact on Company training practices.

Asked to cite other specific strengths of the Program prompting their support for it, the employers stated that:

It provides management a resource for placement at a later date.

It gives students the opportunity to plan their future.

Students may actively participate in a job activity.

It provides tremendous experience and exposure to jobs.

It allows the students to become familiar with the job market and its fluctuations.

The employers also volunteered several insightful comments about the shortcomings of the Program, which if left unattended might abate their support for it:

1. Follow-up information on students was lacking.
2. Too short a time at work site existed.
3. Transportation can be a problem.

B. ACADEMIC PROGRAM

Question 1: Did the students maintain academic skills?

The principal means of assessing this objective was the CTBS test. Individual and group scores on the four sub-tests confirm the finding that the EBCE students maintained or surpassed their achievement on the pre-test. The pre/post test comparisons, percentiles, stanines, grade equivalents, expanded standard scores and their statistical significance level are presented below by sub-test and accompanied by the evaluator's summary.

Reading Comprehension Sub-Test (Table 2)

As a group (N=24), the EBCE students improved their skills in reading comprehension to a highly significant degree. Twenty of the 24 students increased in their raw score value between pre/post testing (45 points). Four of these 20 students actually had an average increase of 11 points. Those students who decreased from pre to post generally had very high scores to begin with; one, conversely, had an extremely low pre-test reading score.

In terms of stanine measures, the group moved from the fourth to the fifth stanine, placing them from just below average to slightly above average on the basis of national comparisons. Concomitantly, the group increased from the 39th to 51st percentile over the nine month period.

Another measure of growth on this sub-test of the CTBS is the grade equivalent of raw scores. In this case, the students again showed an impressive average increase of One Year and Six Months gain from pre to post test, increasing from the 10.1 level to the 11.7 level.

The authors of the CTBS recommend that the grade equivalent measures be supplemented by another research technique in order to assess in greater depth the scores of the group:

CTBS SCORES BY SUB-TEST READING COMPREHENSION

tudent	School	Pre-Test 45 Items Read. Comp Test # 2 Raw Score	Stan.	%tile Rank	Grade Equivalent	Post-Test 45 Items Read. Comp. Test # 2 Raw Score	Stan.	%tile Rank	Grade Equivalent	Difference Raw Score	Stan.	%tile Rank	Grade Equivalent
		19	3	16	8.1	29	4	39	11.3	+10	+1	+23	3.2
		42	8	94	13.6	41	7	89	13.6	- 1	-1	-5	0
		12	1	3	4.5	25	4	27	10.2	+13	+3	+24	5.7
		35	6	64	13.6	41	7	89	13.6	+ 6	+1	+25	0
		26	4	34	10.5	32	5	48	12.4	+ 6	+1	+14	1.9
		25	4	31	10.2	31	5	45	12.0	+ 6	+1	+14	1.8
		31	5	49	12.0	38	6	74	13.6	+ 7	+1	+25	1.6
		19	3	16	8.1	24	4	24	10.0	+ 5	+4	+ 8	1.9
		35	6	64	13.6	44	9	98	13.6	+ 9	+3	+34	0
		21	3	20	9.0	30	5	42	11.6	+ 9	+2	+22	2.6
		23	4	26	9.7	28	4	36	11.0	+ 5	0	+10	1.3
		40	7	86	13.6	44	9	98	13.6	+ 4	+2	+12	0
		17	3	11	7.1	23	3	22	9.7	+ 6	0	+11	2.6
		34	6	60	13.6	38	6	74	13.6	+ 4	0	+14	0
		43	9	97	13.6	41	7	89	13.6	- 2	-2	- 8	0
		13	2	5	5.0	23	3	22	9.7	+10	+1	+17	4.7
		NA/late	-	-			-				-	-	
		30	5	46	11.6	34	5	56	13.6	+ 4	0	+10	2.0
		30	5	46	11.6	34	5	56	13.6	+ 4	0	+10	2.0
		13	2	5	5.0	24	4	24	10.0	+11	+2	+19	5.0
		20	3	18	8.5	21	3	17	9.0	+ 1	0	- 1	.5
		31	5	49	12.0	35	6	60	13.6	+ 4	+1	+11	1.6
		10	1	2	3.7	9	1	1	3.4	- 1	0	- 1	- .3
		28	4	40	11.0	30	5	42	11.6	+ 2	+1	+ 2	.6
		37	6	73	13.6	34	5	56	13.6	- 3	-1	-17	0
		$\frac{634}{24}$	$\frac{105}{24}$	$\frac{955}{24}$	$\frac{242.8}{24}$	$\frac{781}{24}$	$\frac{122}{24}$	$\frac{1228}{24}$	281.5		$\frac{+17}{24}$	$\frac{+273}{24}$	$\frac{38.8}{24}$
	Group $\bar{X}$ =	26.42	4.37	39.79	10.12	32.54	5.08	51.16	11.72	+6.12	+.71	+11.37	+1.6

$\bar{X}_2 - \bar{X}_1 =$ +.71 / +11.37 / +1.6

Expanded Standard Scores (Table 3)

In the reading comprehension sub-test, the Expanded Standard Scores (ESS) indicate first of all a substantial increase in pre to post results, with the students gaining 66 points. This gain is significant at the .001 level according to the t-test of significance for analyzing differences between correlated (R=.846) pairs of means.

The evaluators conclude, given an N of 24, a nine month duration from pre to post, and the use of the same form of the test (Level 4, Form S), that in the presence of the EBCE program, these students improved to a significant degree their reading skills. This suggests that the alternative experiential program may contribute to enhancing fundamental reading comprehension.

Mathematics Sub-Test: Part I, Mathematics Application (Table 4)

The EBCE group (N=25) showed raw score pre/post average gains of 1.96, from 15.04 to 17.00 (out of a total possible score of 25 points). Sixteen of the 25 students posted gains. Four students decreased and five students remained the same.

The stanine equivalents remained primarily the same, increasing slightly from 5.04 to 5.28. Similarly, the percentile rank increased marginally from the 50th to the 55th range. This group of 25 students began the year at the 11.58 grade equivalent in mathematics application and exited at the 12.26 grade equivalent, an increase in the equivalent of seven months.

Expanded Standard Scores (Table 5)

The ESS totals indicate a pre to post gain of 27 points, which attains statistical significance at the .01 level. (The R value for correlated pairs is .861.)

TABLE 3

Reading Comprehension
Raw Score to Expanded Standard Score

Student #	Raw Score	Pre ESS	Raw Score	Post ESS
1	19	534	29	637
2	42	860	41	828
3	12	435	25	598
4	35	703	41	828
5	26	608	32	667
6	25	598	31	656
7	31	656	38	753
8	19	534	24	588
9	35	703	44	943
10	21	557	30	646
11	23	578	28	627
12	40	799	44	943
13	17	508	23	578
14	34	690	38	753
15	43	899	41	828
16	13	451	23	578
17	NA/late			
18	30	646	34	690
19	30	646	34	690
20	13	451	24	588
21	20	545	21	557
22	31	656	35	703
23	10	402	9	384
24	28	627	30	646
25	37	735	34	690

Means: Pre = 617.54
Post = 683.29

Standard Deviation: Pre = 128.78
Post = 126.87

R value = .846

t value = 4.54

Significance level = .001

TABLE 4

CTBS SCORES BY SUB-TEST MATH PART I: APPLICATION

Student #	School	Pre-Test 25 Items Math Appl. Test # 7	Stan.	%tile Rank	Grade Equivalent	Post-Test 25 Items Math Appl. Test # 7	Stan.	%tile Rank	Grade Equivalent	Difference Raw Score	Stan.	%tile Rank	Grade Equivalent
1		23	7	87	13.6	24	8	92	13.6	+1	+1	+ 5	0
2		23	7	87	13.6	23	7	86	13.6	0	0	- 1	0
3		15	5	48	11.8	19	6	63	13.6	+4	+1	+15	1.8
4		24	8	93	13.6	24	8	92	13.6	0	0	- 1	0
5		16	5	53	12.7	21	6	74	13.6	+5	+1	+21	.9
6		17	5	57	13.6	20	6	69	13.6	+3	+1	+12	0
7		18	6	62	13.6	18	5	59	13.6	0	-1	- 3	0
8		15	5	48	11.8	18	5	59	13.6	+3	0	+11	1.8
9		21	6	76	13.6	20	6	69	13.6	-1	0	- 7	0
10		11	4	29	9.6	12	4	31	10.1	+1	0	+ 2	.5
11		10	4	24	8.9	11	4	26	9.6	+1	0	+ 2	.7
12		20	6	71	13.6	20	6	69	13.6	0	0	- 2	0
13		14	5	43	11.2	17	5	54	13.6	+3	0	+11	2.4
14		8	3	15	7.5	14	5	41	11.2	+6	+2	+26	3.7
15		16	5	53	12.7	19	6	63	13.6	+3	+1	+10	.9
16		11	4	29	9.6	14	5	41	11.2	+3	+1	+12	1.6
17		10	4	24	8.9	5	1	4	5.0	-5	-3	-20	-3.9
18		14	5	43	11.2	15	5	45	11.8	+1	0	+ 2	.6
19		16	5	53	12.7	19	6	63	13.6	+3	+1	+10	.9
20		20	6	71	13.6	18	5	59	13.6	-2	-1	-12	0
21		11	4	29	9.6	12	4	31	10.1	+1	0	+ 2	.5
22		17	5	57	13.6	16	5	50	12.7	-1	0	- 7	- .9
23		4	1	3	4.2	8	3	13	7.5	+4	+2	+10	3.3
24		18	6	62	13.6	18	5	59	13.6	0	-1	- 3	0
25		14	5	43	11.2	20	6	69	13.6	+4	+1	+26	2.4
		$\frac{376}{25}$	$\frac{126}{25}$	$\frac{1260}{25}$	$\frac{289.60}{25}$	$\frac{425}{25}$	$\frac{132}{25}$	$\frac{1381}{25}$	$\frac{306.70}{25}$	$\frac{24}{25}$	$\frac{46}{25}$	$\frac{121}{25}$	$\frac{17.2}{25}$
	Group $\bar{X}$ =	15.04	5.04	50.40	11.58	17.00	5.28	55.24	12.26	.96	.24	4.84	.68
									$\bar{X}_2 - \bar{X}_1$ =	1.96	.24	4.84	

TABLE 5

Math Application
Raw Score to Expanded Standard Score

Student #	Raw Score	Pre ESS	Raw Score	Post ESS
1	23	780	24	821
2	23	780	23	780
3	15	625	19	685
4	24	821	24	821
5	16	640	21	724
6	17	654	20	703
7	18	669	18	669
8	15	625	18	669
9	21	724	20	703
10	11	561	12	578
11	10	542	11	561
12	20	703	20	703
13	14	610	17	654
14	8	502	14	610
15	16	640	19	685
16	11	561	14	610
17	10	542	5	428
18	14	610	15	625
19	16	640	19	685
20	20	703	18	669
21	11	561	12	578
22	17	654	16	640
23	4	398	8	502
24	18	669	18	669
25	14	610	20	703

Means: Pre = 632.96
Post = 659

Standard Deviation: Pre = 92.75
Post = 88.65

R value = .861

t value = 2.715

Significance level = .01

The evaluators conclude that these students significantly improved their applications of mathematics over the nine month exposure of EBCE.

Mathematics Sub-Test: Part II, Mathematics Concepts (Table 6)

The EBCE group (N=25) had raw score pre-post average gains of 1.88, from 11.68 to 13.56 (out of a total possible score of 25 points). Eleven of the 25 students posted gains. Eight students decreased, and six remained the same.

The stanine equivalents remained primarily the same, increasing slightly from 3.28 to 3.80. Correspondingly, the percentile ranks increased somewhat from the 25th to the 33rd range. In terms of grade equivalents the group moved from a pre-level of 8.36 to a post-level of 9.36. In order to analyze these results more fully, these scores were translated into ESS values and showed that the groups gained 34 post-test points, with an R value of .683 and a t-value of 1.643 which fails to attain significance at the .05 level. The relatively low R value should be underscored as a factor in the lack of significance, suggesting inconsistencies and lack of homogeneity among the pairs of this sub-test.

Expanded Stand Scores (Table 7)

The evaluators find that the students' mathematics concepts improved slightly in terms of ESS, but a bit more impressively in grade equivalents. The increases, however, do not attain significance, and the contributions of EBCE to the gains cannot be quantitatively asserted.

TABLE 6

CTBS SCORES BY SUB-TEST MATH PART II: CONCEPTS

dent	School	Pre-Test 25 Items Math Conc. Test # 7	Stan.	%tile Rank	Grade Equiva-lent	Post-Test 25 Items Mat Conc. Test # 7	Stan.	%tile Rank	Grade Equiva-lent	Differ-ence Raw Score	Stan.	%tile Rank	Grade Equiva-lent
		13	4	26	9.5	16	4	38	10.8	+ 3	0	+12	1.3
		24	8	92	13.6	22	6	77	13.6	- 2	-2	-15	0
		13	4	26	9.5	20	6	61	13.6	+ 7	+2	+35	4.1
		23	7	85	13.6	23	7	85	13.6	0	0	0	0
		13	4	26	9.5	13	4	24	9.5	0	0	- 2	0
		11	3	18	8.6	5	1	1	3.8	- 6	-2	-17	-4.8
		16	4	40	10.8	23	7	85	13.6	+ 7	+3	+45	2.8
		0	1	1	2.0	13	4	24	9.5	+13	+3	+23	7.5
		9	2	10	7.4	21	6	69	13.6	+12	+4	+59	6.2
		8	2	7	6.5	8	2	6	6.5	0	0	- 1	0
		10	3	14	8.0	14	4	29	9.9	+ 4	+1	+15	1.9
		22	7	78	13.6	21	6	69	13.6	- 1	-1	- 9	0
		11	3	18	8.6	10	3	12	8.0	- 1	0	- 6	- .6
		5	1	2	3.8	5	1	1	3.8	0	0	- 1	0
		7	2	5	5.6	12	3	20	9.1	+ 5	+1	+15	3.5
		4	1	1	3.0	3	1	1	2.4	- 1	0	0	- .6
		8	2	7	6.5	8	2	6	6.5	0	0	- 1	0
		14	4	31	9.9	14	4	29	9.9	0	0	- 2	0
		9	2	10	7.4	12	3	20	9.1	+ 3	+1	+10	1.7
		10	3	14	8.0	17	5	43	11.3	+ 7	+2	+29	3.3
		9	2	10	7.4	7	1	4	5.6	- 2	-1	- 6	-1.8
		16	4	40	10.8	13	4	24	9.5	- 3	0	-16	-1.3
		5	1	2	3.8	3	1	1	2.4	- 2	0	- 1	-1.4
		16	4	40	10.8	17	5	43	11.3	+ 1	+1	+ 3	.5
		16	4	40	10.8	19	5	55	13.6	+ 3	+1	+15	2.8
		$\frac{292}{25}$	$\frac{82}{25}$	$\frac{643}{25}$	$\frac{209.0}{25}$	$\frac{339}{25}$	$\frac{95}{25}$	$\frac{827}{25}$	$\frac{234.1}{25}$	$\frac{47}{25}$	$\frac{13}{25}$	$\frac{184}{25}$	$\frac{25.1}{25}$
	Group $\bar{X}$ =	11.68	3.28	25.72	8.36	13.56	3.8	33.08	9.36	1.88	.52	7.36	1.0
									$\bar{X}_2 - \bar{X}_1$ =	1.88	.52	7.36	1.0

TABLE 7

Math Concepts
Raw Score to Expanded Standard Score

Student #	Raw Score	Pre ESS	Raw Score	Post ESS
1	13	568	16	615
2	24	815	22	739
3	13	568	20	686
4	23	773	23	773
5	13	568	13	568
6	11	532	5	384
7	16	615	23	773
8	0	209	13	568
9	9	490	21	710
10	8	466	8	466
11	10	512	14	584
12	22	739	21	710
13	11	532	10	512
14	5	384	5	384
15	7	441	12	550
16	4	353	3	320
17	8	466	8	466
18	14	584	14	584
19	9	490	12	550
20	10	512	17	631
21	9	490	7	441
22	16	615	13	568
23	5	384	3	320
24	16	615	17	631
25	16	615	19	666

Means: Pre = 533.44
Post = 567.96

Standard
Deviation: Pre = 132.03
Post = 132.17

R value = .684

t value = 1.643

Significance level = N.S.

Social Studies Sub-Test (Table 8)

Raw scores, stanines, percentile ranks, and grade equivalent comparisons for the Social Studies Sub-Test for the 25 students indicate a slight increases: (1.32 average raw score gains; .20 stanine, from 4.6 to 4.8; 1.92 percentile gain, from the 45th to 47th rank; and a two-month grade equivalent, from 11.1 to 11.3).

Expanded Standard Scores (Table 9)

The ESS conversions indicate a pre to post gain of 21 points, with an R value of .891 and a t-value of 2.039 approaching significance at the .05 level (.05 level of significance is 2.064 for this test).

The evaluators noted that a possible "ceiling effect" may have been at stake because several of the students scored at maximum levels for grade equivalents (13.6). But when these grade equivalents are subjected to ESS conversions, the ceiling-out factor can be accounted for and the group's progress can be more justly analyzed. In other words, these students did post substantial gains in Social Studies, even though as a composite groups they were generally well prepared to begin with. The conclusion is that they were even better prepared after spending an academic year in EBCE.

Science Sub-Test (Table 10)

The 25 EBCE students exhibited significant gains in the Science Sub-Test. Average raw scores increased from 22 to nearly 25 on the 40 item test. The group moved from the fourth to the fifth stanine and from the 43rd to the 51st percentile. Starting at the 10.89 grade level, they progressed to the 11.54 grade level, an increase of six and a half months.

TABLE 8

CTBS SCORES BY SUB-TEST: SOCIAL STUDIES

dent	School	Pre-Test 39 Items Soc. Stud. Test # 10	Stan.	%tile Rank	Grade Equiva-lent	Post-Test 39 Items Soc. Stud. Test # 10	Stan.	%tile Rank	Grade Equiva-lent	Differ ence Raw Scores	Stan.	%tile Rank	Grade Equiva-lent
1		20	4	33	10.4	23	4	40	11.4	+3	0	+ 7	1.0
2		37	8	94	13.6	39	9	99	13.6	+2	+1	+ 5	0
3		14	3	14	7.1	16	3	18	8.4	+2	0	+ 4	1.3
4		33	6	76	13.6	36	7	88	13.6	+3	+1	+12	0
5		27	5	56	13.0	26	5	49	12.5	-1	0	- 7	- .5
6		24	5	46	11.7	22	4	37	11.1	-2	-1	- 9	- .6
7		27	5	56	13.0	30	6	61	13.6	+3	+1	+ 5	.6
8		19	4	30	10.1	22	4	37	11.1	+3	0	+ 7	1.0
9		33	6	76	13.6	36	7	88	13.6	+3	+1	+12	0
0		24	5	46	11.7	26	5	49	12.5	+2	0	+ 3	.8
1		21	4	37	10.7	24	5	43	11.7	+3	+1	+ 6	1.0
2		31	6	68	13.6	32	6	69	13.6	+1	0	+ 1	0
3		22	4	40	11.1	13	2	10	6.0	-9	-2	-30	-5.1
4		23	5	43	11.4	27	5	52	13.0	+4	0	+ 9	1.6
5		32	6	72	13.6	34	7	78	13.6	+2	+1	+ 6	0
6		22	4	40	11.1	17	3	21	9.1	-5	-1	-19	-2.0
7		11	2	7	5.0	14	3	12	7.1	+3	+1	+ 5	2.1
8		22	4	40	11.1	28	5	55	13.5	+6	+1	+15	2.4
9		20	4	33	10.4	20	4	30	10.4	0	0	- 3	0
0		11	2	7	5.0	16	3	18	8.4	+5	+1	+11	3.4
1		21	4	37	10.7	16	3	18	8.4	-5	-1	-19	-2.3
2		23	5	58	13.5	33	6	73	13.6	+5	+1	+15	.1
3		15	3	17	7.9	12	2	8	5.5	-3	-1	- 9	-2.4
4		22	4	40	11.1	29	5	58	13.6	+7	+1	+18	2.5
5		34	7	80	13.6	35	7	83	13.6	+1	0	+ 3	0
		$\frac{593}{25}$	$\frac{115}{25}$	$\frac{1146}{25}$	$\frac{277.6}{25}$	$\frac{626}{25}$	$\frac{120}{25}$	$\frac{1194}{25}$	$\frac{282.5}{25}$	$\frac{33}{25}$	$\frac{+5}{25}$	$\frac{+48}{25}$	$\frac{4.9}{25}$
	Group $\bar{X}$ =	23.72	4.6	45.84	11.1	25.04	4.8	47.76	11.3	+1.32	+0.20	+1.92	+.20
									$\bar{X}_2 - \bar{X}_1$ =		+0.20	+1.92	+.20

TABLE 9

SOCIAL STUDIES
Raw Score to Expanded Standard Score

Student #	Raw Score	Pre ESS	Raw Score	Post ESS
1	20	577	23	608
2	37	816	39	912
3	14	497	16	527
4	33	715	36	783
5	27	646	26	636
6	24	618	22	598
7	27	646	30	675
8	19	565	22	598
9	33	715	36	783
10	24	618	26	636
11	21	588	24	618
12	31	687	32	700
13	22	598	13	481
14	23	608	27	646
15	32	700	34	733
16	22	598	17	540
17	11	446	14	497
18	22	598	28	655
19	20	577	20	577
20	11	446	16	527
21	21	588	16	527
22	28	655	33	715
23	15	512	12	464
24	22	598	29	665
25	34	733	35	755

Means: Pre = 613.8
Post = 634.24

Standard Deviation: Pre = 86.59
Post = 108.27

R value = .891

t value = 2.039

Significance level = approaching .05

TABLE 10

CTBS SCORES BY SUB-TEST SCIENCE

udent #	School	Pre-Test 40 Items Science Test # 9	Stan.	%tile Rank	Grade Equiva-lent	Post-Test 40 Items Science Test # 9	Stan.	%tile Rank	Grade Equiva-lent	Differ-ence Raw Score	Stan.	%tile Rank	Grade Equiva-lent
1		24	5	53	12.4	32	7	81	13.6	* 8	+2	+28	1.2
2		31	7	80	13.6	31	6	76	13.6	0	-1	- 4	0
3		21	4	40	11.0	22	4	40	11.4	+ 1	0	0	.4
4		32	7	84	13.6	36	8	95	13.6	+ 4	+1	+11	0
5		27	6	64	13.6	32	7	81	13.6	+ 5	+1	+17	0
6		23	5	43	11.9	19	4	27	10.0	- 4	-1	-16	-1.9
7		27	5	56	13.6	30	6	72	13.6	+ 3	+1	+16	0
8		21	4	37	11.0	24	5	43	12.4	+ 3	+1	+ 6	1.4
9		36	9	96	13.6	36	8	95	13.6	0	-1	- 1	0
10		17	4	23	8.7	16	3	16	8.0	- 1	-1	- 7	- .7
11		22	5	44	11.4	20	4	31	10.4	- 2	-1	-13	-1.0
12		28	6	68	13.6	30	6	72	13.6	+ 2	0	+ 4	0
13		17	4	23	8.7	16	3	16	8.0	- 1	-1	- 7	- .7
14		15	3	15	7.2	23	5	44	11.9	+ 8	+2	+29	4.7
15		24	5	53	12.4	30	6	72	13.6	+ 6	+1	+19	1.2
16		16	3	19	8.0	16	3	16	8.0	0	0	- 3	0
17		18	4	27	9.5	17	3	20	8.7	- 1	-1	- 7	- .8
18		22	5	44	11.4	29	6	68	13.6	+ 7	+1	+24	2.2
19		19	4	31	10.0	24	5	48	12.4	+ 5	+1	+17	2.4
20		21	4	40	11.0	23	5	44	11.9	+ 2	+1	+ 4	.9
21		16	3	19	8.0	18	4	23	9.5	+ 2	+1	+ 4	1.5
22		17	4	23	8.7	27	6	60	13.6	+10	+2	+37	4.9
23		14	3	12	6.4	7	1	1	2.8	- 7	-2	-11	-3.6
24		25	5	57	13.0	26	5	56	13.6	+ 1	0	- 1	.6
25		19	4	31	10.0	31	6	76	13.6	+12	+2	+45	3.6
		$\frac{552}{25}$	$\frac{118}{25}$	$\frac{1082}{25}$	$\frac{272.3}{25}$	$\frac{615}{25}$	$\frac{126}{25}$	$\frac{1273}{25}$	$\frac{288.6}{25}$	$\frac{63}{25}$	$\frac{+8}{25}$	$\frac{191}{25}$	$\frac{16.3}{25}$
	Group $\bar{X}$ =	22.08	4.72	43.28	10.89	24.60	5.04	50.92	11.54	+2.52	+0.32	+7.64	.65
									$\bar{X}_1 - \bar{X}_2$ =		+0.32	+7.64	.65

Expanded Standard Scores (Table 11)

The conversion of raw scores to ESS values confirmed these gains in statistical terms, showing a pre to post mean gain of 33 points, an R value of .806, and a t-value of 2.603 which is significant beyond the .01 level.

Students' gains in science skills were statistically significant, and the third-party evaluators conclude that a positive relationship exists between participation in EBCE and improving basic science skills.

During the second year, the students were given tests in the four conventional basic skill areas. Although considerable data are available about the individual tests, it is not possible to present a full-scale battery measure since the remaining six sub-tests (e.g. language) were not administered. Nevertheless, the students' gains are generally remarkable and point to a very probable relationship between experienced-based learning and academic skills, implying that the latter benefits in the company of the former.

TABLE 11

Science
Raw Score to Expanded Standard Score

Student #	Raw Score	Pre ESS	Raw Score	Post ESS
1	24	630	32	737
2	31	720	31	720
3	21	592	22	605
4	32	737	36	825
5	27	666	32	737
6	23	618	19	565
7	27	666	30	705
8	21	592	24	630
9	36	825	36	825
10	17	535	16	519
11	22	605	20	579
12	28	678	30	705
13	17	535	16	519
14	15	502	23	618
15	24	630	30	705
16	16	519	16	519
17	18	550	17	535
18	22	605	29	691
19	19	565	24	630
20	21	592	23	618
21	16	519	18	550
22	17	535	27	666
23	14	485	7	354
24	25	642	26	654
25	19	565	31	720

Means: Pre = 604.32
Post = 637.24

Standard Deviation: Pre = 80.78
Post = 106.58

R value = .806

t value = 2.603

Significance level = .01

Question 2: Did the students increase their motivation to learn and achieve through their participation in EBCE?

The prime measures used to address this question are specific attitudinal items in the student questionnaire, the parent interview, and the Resource Person questionnaire.

The items in each instrument pertaining to this objective are presented below, along with the mean Likert response rate.

Item	Student Questionnaire	$\bar{X}$ Likert*
1	The program has increased your motivation level toward school.	3.85 (Agree)
14	How well did the EBCE program compare to your past school experiences?	4.48 (Much Better)
15	How would you rate the EBCE staff in relation to past teachers?	4.78 (Much Better)
16	As a result of the program, you have talked with your parents concerning your goals.	4.30 (Definitely Yes)
17	Your self perceptions have improved.	3.93 (Yes)
18	Your attitudes toward self have been enhanced.	4.07 (Yes)

Item	Parent Interview	% Yes
4	Do you think the EBCE program was more valuable for your child than a traditional school program? If yes: What do you think the EBCE Program offered your child that a "traditional" school program does not? The most frequent responses (N=13) were that EBCE aided in the transition to work and career and (N=3) that the program enhanced the students' motivation to learn.	92%
5	Do you think if your child had it to do over that he/she would opt the EBCE Program over traditional studies?	92%

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*Criterion = 3.5.

Item	Resource Person Questionnaire	$\bar{X}$ Likert
5	What is the degree of interest shown by the EBCE students at your site?	3.95 (Above average)
6	Based on EBCE students placed at your site, do you feel these students showed interest in the concept of EBCE?	4.42 (Definitely yes)

The responses of the three groups to items explicitly or implicitly related to student motivation and achievement indicate that this objective was fulfilled. All responses are above the 3.5 criterion or above 90% (Yes vs. No). Also four of the students reported during mid-year interviews that they more than likely would have dropped out of school if they were not enrolled in EBCE. It is also a high testimony to this program that all students graduated from high school.

Question 3: Were alternative learning opportunities provided for students in non-traditional occupational roles?

Two methods were used to address this objective. One was a federal rating sheet probing Sex Bias and Sex Role Stereotyping as confronted by the EBCE project. This rating sheet contained five areas which were completed by the four project staff. These areas represented: #1 Project assignments, #2 Nature and Range of the assignments, #3 Behavior of Project Teachers, Counselors, et al., toward Students in the Project, #4 Counseling and Guidance Programs, and #5 Curriculum and Instructional Materials. See Appendix for responses to the rating sheet.

The evaluators selected seven items from this rating sheet which are directly related to assessing the Project's success in providing a non-sexist learning opportunities. The items and the staff responses are presented below. The maximum positive response is 4 (there are 4 staff members).

Item	Area	# Agreeing (Yes)
8. Students are equally encouraged to pursue their areas of strength or to correct their areas of weakness without regard for their sex.	3	4
3. Counselors recommend programs and courses without regard to the sex of the inquiring student.	4	2
7. As great an emphasis is placed on the career choices and career decisions of women as on the same decisions of men..	4	4
11. Students are informed of changing employment practices which previously operated to restrict career choice.	4	4
12. Students are encouraged to value and to develop intellectual abilities without regard to sex.	4	4
13. All students are helped to explore the advantages and disadvantages of course preferences and career choices, including such aspects as: --the income levels associated with various skills and knowledges in the society. --individual freedom of choice as associated with income and the various skills and knowledges in the society. --personal satisfaction that can occur from working in areas of greatest individual interest and potential.	4	4
15. Special programs of counseling, guidance, placement, and peer support are provided young people who select nontraditional career and educational pursuits.	4	3

The staff generally concurs that opportunities are provided for non-traditional occupational roles and that the structure of the EBCE program is to accomplish this purpose. The one area, Counselor recommending programs regardless of student sex, which receives the least agreement by the staff is a possible weakness of the program. One of the staff indicated that this was not done, and one did not answer.

This is obviously only a partial and subjective means of assessing this objective. To supplement the rating responses, the evaluators asked the project staff to indicate specific activities and opportunities which took place during the year to accomplish this objective. First of all, the Project Manager is in a unique position to discover and encourage non-sexist opportunities by virtue of her membership on the Allegany County Board of Education Title IX Committee. During the first semester (October 31, November 28, and December 19), the Project Manager conducted student seminars in the areas of non-traditional jobs for men, non-traditional jobs for women, and pending issues in Title IX. She conducted programs in conjunction with the seminars to insure non-discrimination on the basis of sex in the EBCE program under the theme of "Traditional Role/Non-Traditional Job." Plans were formulated furing the second semester to insitute a "non-traditional job day." All EBCE students would be placed in a non-traditional site for one-day (to be effected during the third project year).

The second measure used to gauge the project's success in providing non-traditional alternatives is the number of actual non-traditional site experiences engaged in by the EBCE students. Table 1 (see Goal A, Question 1) indicates that as a group the students were exposed to 19 of these experiences, with the most common occupational clusters being public service (8 experiences); construction, health occupations, and marketing and distribution (2 experiences each); and five clusters with one experience each: environment, fine arts and humanities, manufacturing, personal service, and transportation.

The evaluators conclude that attempts were made to introduce the female students to non-traditional roles. However the male students were not introduced (perhaps by their own volition) to these same experiences.

Question 4: Did the EBCE project provide the students with the personal skills required to make effective career decisions?

In order to answer this question, the evaluators administered the experimental edition of the College Entrance Examination Board (CEEB) Career Decision-Making Skills (CDMS) test. The students scores on the seven areas of this CDMS are computed in tabular form, by means of composite scores, pre to post comparison for the whole test. Evaluator explanations and conclusions are also included.

The students (N=25) showed increases from pre to post in all seven sub-scales. The gains for each scale were as follows:

--defining the problem = .20
--establishing action plan = .28
--clarifying values = .60
--identifying alternatives = 1.12
--discovering probable outcomes = 1.12
--eliminating alternatives systematically = .60
--and, starting action = .40

CDMS Pre and Post Scores (Tables 12 and 13)

The total composite gain on the CDMS was 4.32 points. This is a highly significant gain in statistical terms, at the .005 level with an R value of .801 and a t-value of 3.191. In other words, as measured by this 60 item instrument, the EBCE students acquired the skills required to make effective career decisions. Most notably, their abilities to identify career alternatives and recognize probable career outcomes underwent substantial improvement.*

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*The entire career skills assessment Program of which the CDMS is a part has not according to CEEB officials been normed, and will probably not be normed because of the individual nuances of career programs around the country. Preliminary regional comparisons are forthcoming and if received by the time this report goes to press, they will be included in an appendix.

TABLE 12

CAREER DECISION-MAKING SKILLS: PRE-TEST SCORES

Student #	*N = 4 Defining Problem	*N=11 Establishing Action Plan	*N=9 Clarifying Values	*N=9 Identifying Alternatives	*N=16 Discovering Probable Outcomes	*N=7 Eliminating Alternatives Systematicaly	*N=4 Starting Action	*N=60 Total Score
1	1	7	4	5	6	2	3	28
2	3	10	8	8	14	4	4	51
3	0	3	3	4	2	1	0	13
4	4	11	7	9	[illegible]	2	4	49
5	2	10	6	5	5	5	3	36
6	3	10	6	4	8	4	3	38
7	2	10	4	6	10	3	3	38
8	3	7	0	2	7	4	2	25
9	3	11	8	9	14	6	4	55
10	3	8	6	6	4	0	1	28
11	1	4	4	6	9	3	3	30
12	4	10	6	6	10	7	3	46
13	2	7	2	5	8	4	1	29
14	2	10	5	9	9	6	3	44
15	4	10	8	6	12	5	2	47
16	2	6	3	5	10	1	4	31
17	4	4	5	6	5	3	2	29
18	2	6	5	4	9	6	4	36
19	2	6	6	4	8	5	2	33
20	2	2	2	2	7	3	1	19
21	0	9	5	4	9	2	2	31
22	3	8	7	7	9	1	3	38
23	1	1	5	1	3	3	0	14
24	3	9	4	8	11	4	4	43
25	4	11	6	8	9	6	4	48
roup X̄ =	2.40	7.60	5.00	5.56	8.40	3.60	2.60	35.16

* Maximum score possible

TABLE 13

CAREER DECISION-MAKING SKILLS: POST-TEST SCORES

udent #	*N=4 Defining Problem	*N=11 Establishing Action Plan	*N=9 Clarifying Values	*N=9 Identifying Alter-Natives	*N=16 Discovering Probable Outcomes	*N=7 Eliminating Alternatives Systematicaly	*N=4 Starting Action	*N=60 Total Score
1	2	9	6	6	6	4	2	35
2	4	10	8	9	14	6	3	54
3	4	6	7	7	5	2	3	34
4	3	8	8	7	12	3	3	44
5	4	9	6	6	9	5	4	43
6	2	11	6	7	9	4	4	43
7	3	9	8	7	12	7	3	49
8	1	4	3	4	5	3	2	22
9	3	11	7	9	13	5	4	52
0	4	5	5	6	7	4	2	33
1	2	6	3	7	5	3	2	28
2	4	11	8	8	14	7	4	56
3	2	8	5	6	7	5	2	35
4	2	11	7	8	9	4	4	45
5	3	10	6	7	11	6	4	47
6	2	9	5	7	11	3	3	40
7	2	1	2	6	4	4	1	20
8	2	7	4	7	13	4	3	40
9	4	8	7	7	10	4	3	43
0	2	9	3	6	11	3	3	37
1	1	8	3	6	10	2	3	33
2	2	11	6	6	10	5	4	44
3	1	2	2	5	5	1	2	18
4	3	5	7	7	12	5	3	42
5	3	9	8	6	14	6	4	50
	—	—	—	—	—	—	—	—
oup $\bar{X}$ =	2.60	7.88	5.60	6.68	9.52	4.20	3.00	39.48
e- t fer- e	+.20	+ .28	+ .60	+1.12	+1.12	+ .60	+ .40	+4.32

Standard Deviation = Pre = 11.13
Post = 10.11

R values = .801

t values = 3.191

Level of significance = .005

Question 5: Did the project provide students with employment seeking skills? (Tables 14 and 15)

The CEEB Employment Seeking Skills Test (ESST) was used to address this question. The ESST contains five sub-scales covering 70 items. The students had an average pre-test score of 46.24 and a post-test score of 50.60, providing a highly significant post-test gain of 4.36, significant at the .005 level, with an R value of .777 and a t-value of 3.099. The most significant gains occurred in the areas of "funding and interpreting facts and sources of information about available jobs" (+1.28) and "identifying appropriately written letters, resumes, and applications for potential employers" (+1.92).

The results confirm the conclusion that the project succeeded in providing students with employment seeking skills.

TABLE 14

EMPLOYMENT-SEEKING SKILLS: PRE-TEST SCORES

Student #	*N=13 Anticipate job prospects	*N = 23 Find and interpret facts and sources of information about available jobs	*N = 18 Identify appropriately written letters, resumes, and applications for potential employers	*N = 9 Describe appropriate behavior and appearance as one is interviewed and evaluated for a job	*N = 7 Evaluate when a specific job fits a person's needs and interests	Total Score
1	7	10	11	6	1	35
2	13	23	17	8	7	68
3	6	11	7	6	4	34
4	10	16	16	7	6	55
5	11	14	15	7	7	54
6	10	17	13	6	7	53
7	10	14	12	8	6	50
8	9	12	5	5	2	33
9	12	15	16	9	6	58
10	8	14	10	3	6	41
11	9	15	11	4	5	44
12	8	19	13	8	7	55
13	10	12	11	5	6	44
14	11	13	9	6	5	44
15	9	18	15	7	7	56
16	7	11	12	4	6	40
17	6	16	7	7	5	41
18	11	15	13	6	6	51
19	12	15	7	6	6	46
20	11	8	10	5	6	40
21	8	12	9	8	4	41
22	11	15	12	6	2	46
23	6	8	4	2	4	24
24	9	14	12	6	6	47
25	10	19	12	8	7	56
roup $\bar{X}$ =	9.36	14.24	11.16	6.12	5.36	46.24

*Total possible correct

TABLE 15

EMPLOYMENT-SEEKING SKILLS: POST-TEST SCORES

Stu-dent #	*N=13 Anticipate job Prospects	*N=23 Find and interpret facts and sources of information about available jobs	*N=18 Identify appropriately written letters, resumes, and applications for potential employers	*N = 9 Describe appropriate behavior and appearance as one is interviewed and evaluated for a job	*N = 7 Evaluate when a specific job fits a person's needs and interests	Total Score
1	10	14	9	4	6	43
2	13	19	17	9	7	65
3	11	12	13	7	6	49
4	11	18	17	7	5	58
5	9	15	14	6	7	51
6	11	18	12	6	7	54
7	13	21	15	8	7	64
8	7	14	7	5	4	37
9	12	20	15	9	7	63
10	9	14	12	6	6	47
11	12	18	13	7	7	57
12	12	19	17	8	7	63
13	7	12	10	8	3	40
14	10	11	15	7	7	50
15	11	19	16	8	7	61
16	8	12	8	5	6	39
17	0	10	9	2	3	24
18	9	17	14	5	7	52
19	7	14	13	6	7	47
20	9	15	13	6	5	48
21	11	13	15	7	7	53
22	11	16	13	8	7	55
23	4	12	6	2	2	26
24	10	18	17	8	7	60
25	10	17	17	8	7	59
roup $\bar{X}$ =	9.48	15.52	13.08	6.48	6.04	50.60
re/Post iffer- nce	+ .12	+1.28	+1.92	+ .36	+ .68	+4.36

*Total possible correct

Standard Deviation = Pre = 9.62
Post = 11.06

R values = .777

t values = 3.099

Level of Significance = .005

Question 6: Did the Project enhance the employability of each student?

Two measures were used to address this question: the continuing follow-up report of first year (1976-77) and second year (1977-78) EBCE students; and the responses of the students to a specially designed questionnaire.

There were fourteen items on the student questionnaire that probed the issue of the enhancement of employability. The responses are presented below in terms of an average group response to the item within a five-point Likert-type scale. A score of 3.5 or above would indicate a positive and superior attitude toward a given item.

Students Currently Enrolled in EBCE

	Item	$\bar{X}$ Response
1.	EBCE exposed you to the world of work and aided your decision-making skills	4.63
2.	You were given the opportunity to pursue your interest area	4.66
3.	You were aided in choosing a career.	3.63
4.	By participating in the program you acquired a saleable skill necessary for employment after graduation	3.66
5.	You now have a better understanding of the world of work, i.e., job availability and necessary requirements	3.78
6.	The program increased your ability to work with others	4.00
7.	On-site experience in actual work situations was provided	4.55
8.	The experience was worthwhile considering the time involved	4.81
9.	You are now more aware of individual aptitude for specific jobs or career aspirations	3.85
10.	Greater chance of community employment	3.74
11.	Talked with parents concerning goals	4.30

12.	Improved attitude toward work	4.11
13.	Improved interpersonal social skills	4.07
14.	Increased ability to solve problems	3.85

All of the responses surpass the criterion level of 3.5, and as a cluster, they suggest that the students' employability has been enhanced through their participation in EBCE.

The other measure used to determine general indication about employability was the follow-up report.

First Year Student Follow-up Questionnaire

A first year student follow-up questionnaire was developed and mailed to the 23 students who completed the first year in the EBCE project. The purpose of the questionnaire was to determine their present status and its relationship to participation in the EBCE project. Eighteen (18) of the twenty-three (23) students (78%) returned their questionnaires. Tabulation of the data provided the following information:

1. Nine (9) of the students (50%) were enrolled in post-secondary education: 6 in four year colleges and universities, 1 in Junior College, 1 in Business School, and 1 in Air Travel School.
2. Eight (8) of these nine students (89%) indicated that their experience in EBCE had an influence on their choice of studies.
3. Twelve (12) of the students (67%) indicated that EBCE was beneficial in aiding them in making their choice of careers.
4. Nine (9) of the students (50%) plan to pursue a career after graduation that was similar to their EBCE experience.
5. Seven (7) of the students (39%) are employed full time and four (4) are employed part-time (22%).
6. Seven (7) of the eleven are employed (64%) in an area related to their EBCE experience.
7. Thirteen (13) viewed the EBCE program as beneficial to their career choice (72%).

The Questionnaire also contained six items which allowed them to look in retrospect at their EBCE experience. Utilizing a 5-point Likert scale the results of this inquiry was as follows:

1. Increased ability to work with others, very effective, $\bar{X} = 4.22$
2. Benefit of on-site experience, extremely beneficial, $\bar{X} = 4.33$
3. Total EBCE Experience, very worthwhile, $\bar{X} = 4.83$
4. Affect on attitude toward work, great deal of effect, $\bar{X} = 4.67$
5. Occupational plans, approaching firm, $\bar{X} = 3.89$
6. Academic curriculum provided by the EBCE program, more than adequate, $X = 3.77$

With respect to future employability, it would seem that certain trends are developing. A majority of the graduates either find suitable employment and/or enroll in further education. They attribute these successes to participation in EBCE. However, it is very difficult to offer comprehensive assessment and quantifiable indexes about this objective. Also, several students are involved in higher or further education, which in some cases pre-empts employment.

2nd Year Student Follow-Up

The evaluators were able to obtain follow-up information on 29 of the second year EBCE students. It was learned that 17 are enrolled in higher or further education; nine others are employed full-time, two of whom are in the armed services; two are employed part-time; one is unemployed; and one is soon to be married.

Again, the vast majority of the students are either gainfully employed (in almost all cases in Allegany County) or pursuing further education.

Plans have been formulated to follow these students (first and second year) over a longer period of time in order to better substantiate the impact of the EBCE program on their future careers.

"Employability," especially its "enhancement," is a potential variable and difficult to confirm or deny even when behavior or so-called instances of it might be found. Even if a student has been employed, we have no way of being certain that he was employable all along. Furthermore, employment, as we are already too aware from the depressing monthly statistics by the Department of Labor, is often a temporary condition. Thus, conclusions about this attribute for an individual, let alone a group, are difficult to derive and should be regarded as provisional, at best.

D. DISSEMINATION AND REPLICABILITY

Question 1: At the local level were the primary audiences adequately informed about the Project?

Several activities were undertaken to implement the Project and promote its development in the local community. The evaluators collected a list of these activities (enumerated below) and have concluded that this "publicity" objective was accomplished in a very satisfactory manner by the Project. The more specific objective of informing and preparing the resource persons follows after this listing.

1. The evaluators presented the results of the first year assessment to a joint meeting of representatives from the Community Advisory Council, Board of Education, central office supervisors, parents, resource people, project staff, and students. Copies of the evaluation report were distributed to all interested parties.
2. The EBCE Advisory Council sponsored the 1978 student graduation activity on May 26, 1978, which was attended by students, parents, Board of Education members, and RESA personnel.
3. During "American Education Week", November 14-18, 1977, the EBCE staff utilized a window display in the business district of Cumberland, Maryland, depicting several components of the program. The Appendix section contains pictures of the display and other publicity activities during the program year.
4. In June, the Program Manager designed a pamphlet for distribution to all Juniors and interested persons in Allegany County School System.
5. In September 1978, Program Manager was on local PVTV interview show to discuss EBCE and the role of Alternative Education. The program

was to be entered into national and state competition of television broadcasters. The TV station and commentator were awarded School Bell Award for this program. It was the only winner in the Maryland TV competition.

6. A seminar for resource people was conducted in March 1978, to explain program goals and objective, and to obtain feedback regarding their perceptions of the program.

The resource persons indicated that they were generally well informed about the nature, purpose, and function of the program. Their specific reactions to items on the questionnaire were as follows:

1. Did the EBCE staff provide you with the necessary information to help you direct students' activities at your site?

Inadequate	Adequate	More than Adequate	NR
5%	95%	0	0

2. Did the EBCE staff:	Never	Infrequent/Sometimes	Daily/Always
	%	%	%
Show you the Student Acitivity Sheet(s)	26%	42%	32%
Show you the Student Profile	32%	42%	26%
Show you the type of products expected from student	16%	42%	42%
Explain reason for the particular placement	5%	37%	58%
Provide you with feedback on student's progress	53%	26%	21%

Apparently, the employers are not given sufficient feedback about the student from the program staff, but this may be a factor of the expanded sites and increased number of students in the program in the second year.

Because of the overlapping data collected and for ease of discussion, questions 2 and 3 are combined as one question.

Question 2: At the state, regional, and national level were the primary audiences adequately informed about the Project?

Question 3: Were efforts made to extend EBCE to other school systems in the State of Maryland?

Efforts to publicize the project and extend its best features to other school sectors were manifold during 1977-78. They were conducted in a systematic manner, as the following chronological discussion makes evident.

A cooperative agreement was written between various Divisions within the Department of Education, the Regional Education Service Agency in Cumberland, Maryland, and the National Institute of Education, for dissemination of Experience-Based Career Education in the State of Maryland for the year 1977-78 (July 1, 1977-June 30, 1978). Included in the agreement was a statement of the purpose, a list of the participants and their designated responsibilities. Included is a copy of the agreement and a copy of the M.S.D.E. proposal for dissemination of EBCE in Maryland. (See Appendix.)

Two E.B.C.E. Orientation Workshops for L.E.A. representatives and other State personnel were held during the month of December, 1977, specifically on December 5th in Easton, Maryland, and December 9th in Frederick, Maryland. The workshops were attended by various members of the EBCE State Management Committee and 24 people representing 13 Counties.

The orientation and materials were provided by members of the A.E.L. staff. Evaluation forms were completed by those who participated. The results are addressed in the evaluation section and included in the attachment section. Also attached is a list of the participants and their respective organizations.

After completion of the initial orientation, a memorandum was sent to all participants, outlining a schedule for the two-phase training. Copies were sent to the respective L.E.A. Coordinators of Career Education.

Phase I training was held in Anne Arundel County with twelve participants, representing five Counties, and in Washington County with six participants representing four Counties (including an Allegany County EBCE staff member). Also, attending these sessions were representatives of the EBCE State Management Committee. Training in the A.E.L. and the N.W.R.E.L. was provided by representatives of A.E.L. Training in the F.W.L. and R.B.S. was provided by representatives of those labs. As a result of Phase I training, it was the consensus that the A.E.L. Model would best meet the needs of those Counties represented in both sessions, and A.E.L. was then selected as the lead lab.

During Phase II of the State strategy training, 24 teachers, counselors, and administrators, representing 3 Counties, 12 schools, began training on March 29, and completed the first indepth session on April 3. During that period, members of the A.E.L. staff provided training and were assisted by Neil Carey, James Wilson, and members of the State Management Committee. As a result, the Counties formulated a specific timetable for additional training, including curriculum adaptations and projected start-up times for each individual school and county. Dorchester and Howard Counties completed Phase II training during the month of June and will begin implementation in September, 1979.

As a result of Phase II training, Anne Arundel, Charles, and St. Mary's Counties developed specific timetables for additional training, including curriculum adaptations and projected start-up times for each individual school. Schedules for Dorchester and Howard Counties were established by the end of June, 1978.

Presentations on the Experience-Based Career Education concept were given by the State Networking Coordinator at the Maryland State Teachers Association Career Education Conference, held on October 14th, and at the Phi Delta Kappa Conference held May 13th.

A walk-through of the Allegany County EBCE site was conducted for members of the State Management Committee on November 1, 2, 1977. Discussions were also held with members of the EBCE staff, participating students in the program, and parents. The Management Committee has also conducted periodic meetings, one of which was held at the Walbrook High School in Baltimore, Maryland. Included in that meeting were discussions with EBCE students enrolled in their program.

The evaluators have observed that the year of operation (July 1, 1977-June 30, 1978) was well planned and documented in the form of the State Networking Management Plan, complete with objectives, activities, and scheduled times of completion. All objectives have been met on schedule with minimum difficulty and problems.

The orientation workshops have met with a tremendous amount of success. Eighty three percent of the participants found the workshops to be effective. On a 5-point Likert scale, with one representing "poor" and five representing "good," all eight items received greater than a mean score of 3.75 with Leadership, Feeling and Attitudes, Content, and Productivity receiving scores in excess of 4.00.

On a negative note, the project operates on a July 1 - June 30 fiscal year; whereas the major funding source operates on an October 1 - September 30 fiscal year. This involves a three month operation (July - September) where apprehensions run extremely high as a result of funding structures. To date, however, this problem has been minimized because of the cooperative agreement and working relationships of all signatories.

Question 4: Were efforts made to plan for the future direction of the Project as an integral component of the local school system?

On November 29, 1977, a task force was established to develop alternative strategies for normalizing the EBCE program into the Allegany County school system after federal monies terminate. This group conducted formal meetings in November and December, 1977, and again on June 8, 1978.

The task force will meet again on November 2, 1978, to formalize an EBCE program for adoption by the Allegany County Board of Education.

The task force will continue during the next few months to collect data and other pertinent information from school personnel, parents, students, resource people, and the Community Advisory Council in order to formulate a plan of action which will be presented to the Board of Education in February, 1979.

Dr. H. Eugene Hall, RESA Project Director, and Mr. John Frank, EBCE B.O.E. Liaison, have been conducting meetings with the county instructional supervisors and secondary school principals to obtain information and suggestions regarding the EBCE project for use by the task force.

The task force, under the direction of Dr. Hall and Mr. Frank, and with technical assistance provided by the evaluation team, is making excellent progress toward its final goal of maintaining the EBCE project upon termination of federal funds. The evaluators are optimistic about its continuation in September of 1979.

CHAPTER IV

SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS

SUMMARY OF CONCLUSIONS

The following summary conclusions identify the central strengths and weaknesses of the EBCE Project. These conclusions also provide a logical basis for the generation of major recommendations, which are presented in the next section.

Most Successful Dimensions of the EBCE Project

1. Within the Context dimension (see Evaluation Design), the Project's most successful accomplishment was its formulation of a Management Plan.

This plan received wide endorsement and was followed systematically by the project staff during the year. The Administrative changes and clarification of roles and responsibilities also contributed to the efficiency of the project.

2. The Input dimension of the Project was measured by means of assessing the level of Community Support and the progress made toward informing interested educators and planners in other regions within the state about the nature and functions of this experimental alternative. A collaborative effort was made in the form of a State Networking Team to disseminate the Allegany County project to other potential adoptors.

At the local level success can be measured by the expansion of developed career sites, the increased numbers of students and high schools participating, the mature leadership of the CAC, and the activities of the continuation task force.

3. Within the Process dimension, numerous procedural aspects contributed to the successful implementation of the EBCE project.

Most noteworthy were the presentation of various seminars in reducing sex-role stereotyping and use of resource personnel; the successful implementation of the project as a full academic year enterprise; the many local state, and regional public relations activities; the enlarged testing and monitoring procedures; the mobilization of a task force for the continuation of the project beyond federal funding; the concrete acceptance of the project by other school districts in the State; and the continued development of the project staff.

4. In the Product cycle, the major achievement of the project can be expressed in terms of specific learner outcomes. The students' gains over nine months in both academic skills, employment seeking skills, and career decision-making skills were found to be statistically significant and reliable measures of the effectiveness of the project in meetings its stated product objectives.

Least Successful Dimensions of the EBCE Project

1. In the Context dimension, only minor shortcomings were apparent. The first of these concerns the relative imbalance between male and female students. The ratio during the second year was disproportionately 28 females to 12 males. In a similar manner, all 19 non-traditional placements were recorded for female students; not one male student participated in a non-traditional occupational role.

2. In the Input dimension, the amount of feedback given to the resource persons was found to be inadequate. In a more general manner, strategies for institutionalization were still largely informal, lacking concrete methods for continuing critical components of the project in the post-federal funding phase.

3. In the Process dimension, although some improvement took place, the selection of students for the EBCE program contained certain infelicities; the initial pool of interested students (recruitment phase) was extremely low,

resulting perhaps from the "soft sell" approach used this year. As a result, the field was narrowed to begin with, with some schools overly represented and with the male/female ratio out of balance.

4. In the Product dimension, the evaluators observed that the process of student testing should be improved. In several cases, students for one reason or another have not been present during all pre-post testing phases, resulting in different populations for each segment and phase. This seems to be a result of logistical factors, i.e. transportation,as well as programmatic factors, i.e. lack of proper emphasis on the testing component as an indispensable and required feature of this federal project.

Coda

By far, the most impressive feature of the second year EBCE program was the student gains in academic skills and career skills. This phenomenon deserves careful attention at the local and federal level because it may suggest that experiential learning contains unique advantages in meeting the academic and occupational needs of certain adolescents.

The level of community support was also singularly outstanding in the Allegany County community and is a hallmark of this project.

The management aspect of the total project has improved considerably with the development and utilization of a project Management Plan. The administrative functions of the various agencies have been clarified, resulting in an atmosphere of collaboration and joint decision-making. The ingredients for successful continuation of the project are present.

RECOMMENDATIONS

The nature of the evaluation was twofold: formative and summative.

Obviously, some recommendations and subsequent decisions were made formatively at various stages as problems arose and as the project developed during the second year of operation. Thus, this section addresses those recommendations previously concerned with the summative component of the evaluation. The summative recommendations are presented in concert with the aforementioned goal areas. Phrased in general terms, these suggestions are intended to assist the Project planners and implementers in the future development of the Allegany County EBCE Project.

A. COMMUNITY SUPPORT

The evaluation team recommends that:

AN ANALYSIS BE MADE BY THE PROJECT STAFF TO IDENTIFY THE STRENGTHS AND WEAKNESSES OF THE JOB SITES, INCLUDING AN EXAMINATION OF THE INSTRUCTIONAL CAPABILITIES OF THE RESOURCE PERSONS, THE QUALITY OF THE LEARNING ENVIRONMENT, AND AN ESTIMATE OF UNIQUE FEATURES OF THE SITES WHICH MIGHT ATTRACT CERTAIN STUDENTS AND REPEL OTHERS.

SIMILARLY, THE FLOW OF COMMUNICATION FROM THE PROGRAM TO THE RESOURCE SITES SHOULD BE STRENGTHENED BY FORMALIZING THE FEEDBACK ABOUT THE STUDENTS. THIS PRIORITY AREA OF CONCERN SHOULD INCLUDE AN INDEPTH ANALYSIS OF THE AMOUNT OF TIME THAT A LEARNING COORDINATOR (LC) CAN SPEND AT A SITE ONCE THE STUDENT IS PLACED BECAUSE OF THE INCREASE IN THE NUMBER OF STUDENTS THAT THE LC IS CURRENTLY SERVING.

B. ACADEMIC QUALITY

IN ORDER TO OBTAIN A FULL MEASURE OF THE ACADEMIC POTENTIAL OF EACH STUDENT, THE FULL BATTERY OF THE CTBS INSTRUMENT SHOULD BE ADMINISTERED. THUS, ALL TEN TESTS WOULD BE ADMINISTERED ON A PRE-POST BASIS.

THE FOLLOW-UP OF FIRST AND SECOND YEAR GRADUATES OF EBCE SHOULD BE MAINTAINED REGULARLY BY THE PROGRAM STAFF AND A STANDARD FORM SHOULD BE DEVELOPED TO PINPOINT ACADEMIC AND CAREER PATTERNS FOR THESE INDIVIDUALS. THIS IS NECESSARY IN ORDER TO GAUGE THE LONG-TERM IMPACT OF EBCE ON ITS PARTICIPANTS.

D. DISSEMINATION AND REPLICABILITY

THE DIRECTION OF LOCAL DISSEMINATION SHOULD BE AIMED AT SUCH AUDIENCES AS PARENTS AND NON-EBCE TEACHERS AND OTHER SCHOOL PERSONNEL SO THAT THESE GROUPS UNDERSTAND THE NATURE OF EBCE AND ITS ACCOMPLISHMENTS TO DATE. THE GROUPS WILL BE PARTICULARLY INFLUENTIAL DURING THE POST FEDERAL FUNDING PHASE.

IN PLANNING FOR THE LOCAL ADOPTION OF THE PROGRAM OVER THE NEXT SEVERAL YEARS, PROJECT ADMINISTRATORS SHOULD CONSIDER SEVERAL SPECIFIC STEPS IN THE FORMULATION OF THE ACTION PLAN. A CONVENIENT CHECKLIST FOR DETERMINING THE MATURITY OF THIS ACTION PLAN IS CONTAINED ON PAGE 10 (CHAPTER 1) OF THIS REPORT. OF THE THIRTEEN CRITERIA, THE EVALUATORS WOULD SUGGEST THAT THE FOLLOWING BE GIVEN IMMEDIATE PRIORITY:

--THE PROGRAM IS ACCEPTED BY NON-EBCE STAFF.

--EXISTING TRANSPORTATION REGULATIONS ARE ALTERED TO CARRY OUT EBCE ACTIVITIES.

--THE CENTRAL OFFICE COMMITS OTHER RESOURCES TO THE DEVELOPMENT OF THE PROJECT.

--EBCE IS HOUSED IN A PERMANENT FACILITY.

APPENDIX A

INTERIM EVALUATION REPORT

AN INTERIM EVALUATION REPORT
OF THE APPALACHIAN MARYLAND
EXPERIENCE-BASED CAREER EDUCATION PROJECT
1977-78

AN INTERIM EVALUATION REPORT
OF THE APPALACHIAN MARYLAND EXPERIENCE-BASED CAREER EDUCATION PROJECT
1977-78

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April 4, 1978

The purpose of this report is to inform the granting agency and the Regional Education Service Agency (RESA) of Appalachian Maryland about the general progress of the Experienced-Based Career Education (EBCE) Project. This progress report ranges over the period from September 1, 1977, to March 31, 1978. Summary information is provided about major project operations within the context of the newly developed management plan system instituted during this second year of operation of the EBCE project.

The following aspects of the EBCE Project are discussed in this second year interim report:

1. General Progress and Highlights
2. Changes in Testing Procedure
3. Second Year Student Interviews
4. Follow-up of First Year Students
5. Resourse persons and EBCE Staff interviews
6. State Networking and Dissemination

It should be pointed out at this time that the context of this Interim Report is primarily qualitative in nature. In its End-of-Year Evaluation Report, ERFS will incorporate a quantative assessment of each issue and present a comprehensive and empirical appraisal of each major goal area.

General Progress and Highlights

At the end of the first year the End-of-Year Evaluation Report was discussed at the local level, Allegany County. Two related major activities were begun: increased cost-effectiveness through increased student participation and established plan of operations for third and fourth year continuation. As a result, the second year Program began with thirty-two (32) students and increased to forty (40) students with the beginning of the second semester. The first year program contained twenty-four (24) students. Plans are currently being developed for participation by sixty (60) students in the third year of implementation, bringing the third year learning coordinator/student ratio to thirty (30) to one (1).

A task force was established to develop alternative strategies for normalizing the EBCE Program into the Allegany County school system at the completion of the federally funded Project. The task force met formally during November and December and have subsequently conducted numerous meetings with central office and school personnel. These meetings have included the superintendent, assistant superintendent, supervisors, classroom teachers, counselors, principals, parents, students, resource persons, evaluators, the RESA Project Director, the Allegany County liaison, who is also the Federal Programs Director, and the project staff. At this point in time, a tremendous amount of progress has been made toward this major objective. The target date for completion and finalization of the task force recommendations has been set for May, 1978.

At the State level, the State Networking and Dissemination Team has made exceptional progress toward reaching its goal of establishing six new EBCE projects within the State of Maryland. The six counties have been identified and in-depth training is currently being conducted with those county personnel.

The evaluation design and management plan for the EBCE Project has been completed and fully implemented to date. The evaluation component has been completed with the exception of interviews with the staff and resource persons, which were delayed because of inclement weather. Numerous meetings with the EBCE staff have provided information to mention some of their concerns later in this Report. The resource persons' interviews are currently being conducted by telephone and will be forwarded to the local project officer in the near future.

In summary, the EBCE project is functioning at an extremely high level. No major problems have developed other than the ordinary day-to-day operational considerations which typically accompany a project of this nature. Support and enthusiasm for the project are exceptional with continuation efforts highly probable.

Changes in Testing Procedures/Pre-Test Results

In its first full year of operation, September, 1977 through May 31, 1978, the Comprehensive Test of Basic Skills, Form S, Level 4, will be administered to measure student knowledge of various broad areas of the curriculum. The Reading Comprehension, Mathematics Application, Science, and Social Studies sub-tests will be utilized for diagnostic purposes as well as to provide a means of evaluating achievement of the fundamental academic goals of school. Since the project operated for only the second semester last year, student GPA's and graduation requirements were used as the means for establishing academic success. This year, the students will be pre- and post-tested and compared to local and national norms. The pre-test was administered to the 32 EBCE students in September, 1977. The tests were scored and returned to the local project staff for diagnostic purposes. The results of the pre-test are presented in Table 1. One student did not complete the Reading Comprehension portion of the test as he arrived at the testing site too late.

The pre-test data would seem to indicate that this year's EBCE student population comprises a heterogeneous group with some students scoring as high as 40-43 out of 45 on the Reading Sub-test and as low as 9-12. Similar results were recorded on the other three sub-tests. The group would also appear to be a fairly average group overall as the mean scores would indicate: Reading $\bar{X} = 26.97$; Math $\bar{X} = 27.53$; Science $\bar{X} = 21.75$; and Social Studies $\bar{X} = 24.53$.

TABLE 1

STUDENT PRE-TEST CTBS SCORES BY SUB-TEST

Total Possible Scores

Student #	School	45 Read. Comp Test # 2	50 Math Appl. Test # 7	40 Science Test # 9	39 Soc. Stud. Test # 10
1	Allegany	26	29	27	27
2	Allegany	12	28	21	14
3	Bruce	23	20	22	21
4	Oldtown	13	30	21	11
5	Allegany	35	47	32	33
6	Oldtown	30	28	22	22
7	Oldtown	20	20	16	21
8	Allegany	19	36	24	20
9	Bruce	40	42	28	31
10	Bruce	17	25	17	22
11	Bruce	21	19	17	24
12	BW	19	15	21	19
13	Allegany	11	9	16	11
14	Valley	31	33	17	28
15	Beall	17	35	17	24
16	Flintstone	43	23	24	32
17	Flintstone	29	19	18	30
18	BW	35	30	36	33
19	Valley	37	46	19	34
20	Valley	10	9	14	15
21	Oldtown	30	25	19	20
22	Flintstone	34	13	15	23
23	Flintstone	28	18	23	31
24	Beall	38	30	22	32
25	Valley	28	34	25	22
26	BW	38	45	31	33
27	BW	31	34	27	27
28	Beall	25	28	23	24
29	Allegany	42	47	31	37
30	Fort Hill	13	15	16	22
31	Fort Hill	41	31	17	31
32	Fort Hill	NA Late	18	18	11
		$\frac{836}{31}$	$\frac{881}{32}$	$\frac{696}{32}$	$\frac{785}{32}$
	Group $\bar{X}$ =	26.97	27.53	21.75	24.53

A comprehensive analysis and statistical treatment with comparisons of norming groups will be conducted as part of the end-of-year evaluation report, due late September, 1978.

In addition to the CTBS Test for academic achievement, the evaluators administered two experimental editions of career education tests developed by the Career Skills Assessment Program of the College Entrance Examination Board an affiliate of the Educational Testing Service, Princeton, New Jersey. The tests were designed to measure Employment Seeking Skills and Career Decision-Making Skills.

The Employment Seeking Skills Test was scored in its pre-test form in five categories:

1. Anticipating job prospects, 13 questions;
2. Finding out and interpreting facts and scources of information about available jobs, 23 questions;
3. Identifying appropriately written letters, resumes, and applications for potential employers, 18 questions;
4. Describing appropriate behavior and appearance as one is interviewed and evaluated for a job, 9 questions; and
5. Evaluating when a specific job fits a person's needs and interests, 7 questions.

The Career Decision-Making Skills Test in its pre-test form was scored in seven categories:

1. Defining the problem, 4 questions;
2. Establishing an action plan, 11 questions;
3. Clarifying values, 9 questions;
4. Identifying alternatives, 9 questions;
5. Discovering probable outcomes; 16 questions;
6. Eliminating alternatives systematically, 7 questions; and
7. Starting action, 4 questions.

Tables 2 and 3 present the pre-test results by category. On the basis of the mean scores for the group on employment seeking skills (Table 2), the apparent central tendency was for students to correctly answer more than half of the questions by category. Most of the students appear to have already established a knowledge of appropriate behavior and appearance when going to a job interview (column 4, $\bar{X}$ = 6.39 out of a possible 9). The students as a group ($\bar{X}$ = 5.29, column 5) also appear to be able to evaluate a specific job as it relates to needs and interests.

The pre-test data from the Career Decision-Making Skills Test (Table 3) indicate that the students again correctly answered a little over 50 percent of the questions on this test. The one category which surpassed this level of success was "establishing an action plan," ($\bar{X}$ = 7.48 out of 11, Column 2).

The results of the post-test to be administered on May 25-26, 1978, will be used for comparison purposes in a comprehensive analysis of these data in the End-of-Year Evaluation Report.

TABLE 2

EMPLOYMENT-SEEKING SKILLS: PRE-TEST SCORES

Student #	*N = 13 Anticipate job prospects	*N = 23 Find and interpret facts & sources of information about available jobs	*N = 18 Identify appropriately written letters, resumes, and applications for potential employers	*N = 9 Describe appropriate behavior and appearance as one is interviewed and evaluated for a job	*N = 7 Evaluate when a specific job fits a person's needs and interests
1.	13	23	17	8	7
2.	10	14	12	8	6
3.	10	12	11	5	6
4.	11	8	10	5	6
5.	12	16	15	6	6
6.	8	15	11	7	7
7.	10	17	13	6	7
8.	9	15	15	7	5
9.	8	19	13	8	7
10.	12	15	16	9	6
11.	8	12	9	8	4
12.	8	14	10	3	6
13.	12	15	7	6	6
14	10	16	16	7	6
15.	7	10	11	6	1
16.	6	11	7	6	4
17.	11	15	12	6	2
18.	11	13	9	6	5
19.	6	16	7	7	5
20.	11	14	15	7	7
21.	11	20	16	8	6
22.	10	19	12	8	7
23.	9	14	12	6	6
24.	9	12	5	5	2
25.	6	8	4	2	4
26.	4	10	3	2	2
27.	8	15	12	5	4
28.	9	15	11	4	5
29.	11	15	13	6	6
30.	7	11	12	4	6
31.	9	18	15	7	7
$\bar{x}$ = group	9.22	14.42	11.32	6.39	5.29

* Total possible correct

TABLE 3

CAREER DECISION-MAKING SKILLS: PRE-TEST SCORES

Student #	* N = 4 Defining Problem	* N = 11 Establishing Action Plan	* N = 9 Clarifying Values	* N = 9 Identify=ing Alternatives	* N = 16 Discovering probable outcomes	* N = 7 Eliminating Alternatives systematicaly	* N = 4 Starting Action
1	3	8	7	7	9	1	3
2	1	1	5	1	3	3	0
3	2	10	6	5	5	5	3
4	2	4	4	4	7	4	2
5	2	10	4	6	10	3	3
6	4	11	9	8	9	5	4
7	3	10	6	4	8	4	3
8	3	11	6	6	14	2	4
9	3	10	8	8	14	4	4
10	2	8	5	5	10	4	4
11	2	6	3	5	10	1	4
12	2	6	5	4	9	6	4
13	1	7	4	5	6	2	3
14	3	11	8	9	14	6	4
15	3	7	0	2	7	4	2
16	1	3	3	3	8	2	0
17	3	9	4	8	11	4	4
18	4	11	6	8	9	6	4
19	2	7	2	5	8	4	1
20	3	8	6	6	4	0	1
21	4	11	7	9	12	2	4
22	2	2	2	2	7	3	1
23	2	6	6	4	8	5	2
24	0	9	5	4	9	2	2
25	4	4	5	6	5	3	2
26	0	3	3	4	2	1	0
27	1	4	4	6	9	3	3
28	4	10	8	6	12	5	2
29	2	5	5	6	8	4	3
30	2	10	5	9	9	6	3
31	4	10	6	6	10	7	3
	$\bar{X}$ = 2.38	$\bar{X}$ = 7.48	$\bar{X}$ = 5.06	$\bar{X}$ = 5.51	$\bar{X}$ = 8.58	$\bar{X}$ = 3.58	$\bar{X}$ = 2.64

* Maximum score possible

First Year Student Follow-up Questionnaire

A first year student follow-up questionnaire was developed and mailed to the 23 students who completed the first year in the EBCE project. The purpose of the questionnaire was to determine their present status and its relationship to participation in the EBCE project. Eighteen (18) of the twenty-three (23) students (78%) returned their questionnaires. Tabulation of the data provided the following information:

1. Nine (9) of the students were enrolled in post-secondary education: 6 in four year colleges and universities, 1 in Junior College, 1 in Business School, and 1 in Air Travel School.
2. Eight (8) of the students indicated that their experience in EBCE had an influence on their choice of studies.
3. Twelve (12) of the students indicated that EBCE was beneficial in aiding them in making their choice of careers.
4. Nine (9) of the students plan to pursue a career after graduation that was similar to their EBCE experience.
5. Seven (7) of the students are employed full time and four (4) are employed part-time.
6. Seven (7) are employed in an area related to their EBCE experience.
7. Thirteen (13) viewed the EBCE program as beneficial to their employment choice.

The Questionnaire also contained six items which allowed them to look in retrospect at their EBCE experience. Utilizing a 5-point Likert scale the results of this inquiry was as follows:

1. increased ability to work with others, very effective, $\bar{X} = 4.22$
2. benefit of on-site experience, extremely beneficial, $\bar{X} = 4.33$
3. Total EBCE Experience, very worthwhile, $\bar{X} = 4.83$
4. Affect on attitude toward work, great deal of effect, $\bar{X} = 4.67$
5. Occupational plans firm, $\bar{X} = 3.89$
6. Academic curriculum provided by the EBCE program, more than adequate, $\bar{X} = 3.77$

A more detailed description of the data will be provided in the End-of-Year Evaluation Report.

Second Year Student Mid-Semester Interviews

At the end of the first semester this year, a 33 question interview guide was administered to 27 students currently participating in the EBCE programs. Twenty-four (24) of the questions asked them to rate on a 5-point Likert scale (5.0 = high) different aspects of their experience in the first half year of the EBCE program. Nine (9) questions sought specific information, i.e. number of site placements, most and least satisfying activities, hours per week with LC, hours per week at site, quality of counseling services, and availability of learning materials.

Table 4 present the 24-item Likert responses with the accompanying group mean score for each item. Four of the items (2, 3, 11, & 15) were rated extremely high (above 4.63). The students indicated that the experience is worth the time involved ($\bar{X}$ = 4.81); the experience gave them the opportunity to pursue their own interest area ($\bar{X}$ = 4.66); the experience aided in their decision-making process ($\bar{X}$ = 4.63); and the EBCE staff rated very high in comparison to past teaching experiences ($\bar{X}$ = 4.78). All items were given a rating of better than 3.63; 15 of the 24 items were scored higher than 4.00. Surprisingly, the item which scored lowest ($\bar{X}$ = 3.63) was "aided in choosing a career." Perhaps the students view this as having another half year to go before having to choose a career and look forward to the second semester opportunities to explore other areas before having to make a choice.

TABLE 4

END OF 1st SEMESTER. THIS YEAR'S STUDENTS

	N = 27	x̄
1.	Increased motivation toward school	3.85
2.	Aided Decision-Making Process	4.63
3.	Opportunity to pursue your interest area	4.66
4.	EBCE objectives clearly defined	4.03
5.	Aided in choosing a career	3.63
6.	Acquired saleable skill for employment after graduation	3.66
7.	Better understanding of the world of work	3.78
8.	Increased ability to work with others	4.00
9.	Adequate 1-to-1 relationship with LC	4.44
10.	On-site experience was provided in actual work situations	4.55
11.	Experience is worth time involved	4.81
12.	More aware of individual aptitude for specific jobs or career aspirations	3.85
13.	Greater chance of community employment	3.74
14.	Compared to past school experiences	4.48
15.	Rate EBCE staff to past teachers	4.78
16.	Talked with parents concerning goals	4.30
17.	Improved self perception	3.92
18.	Enhanced self attitudes	4.07
19.	Improved attitude toward work	4.11
20.	Improved interpersonal social skills	4.07
21.	Increased ability to solve problems	3.85
22.	Definite occupational plans	3.70
23.	Success of resource person in integrating academic studies with site experiences	4.07
24.	Quality of counseling services	4.55

Other information collected on the interviews can be summarized as follows:

1. Twenty-two (22) students felt that a full year was necessary to complete the EBCE experience.
2. The average amount of time spent with the LC in one week is 2 hours with ranges from 1 to 4 hours.
3. Hours per week at the site vary from 4 hours to 35 hours. The median response was 16 hours.
4. Site placements range from one to 4 with 6 students having been placed at 1 site, 15 at 2 sites, 5 at 3 sites, and 1 at 4 sites.
5. Twenty-four (24) students felt that learning materials were made available to them.

Resource Persons and EBCE Staff Interviews

As pointed out previously, these interviews are currently being conducted.* Some apprehensions on the part of the staff members are apparent at this time. These apprehensions center around the activities involving plans and decisions for continuation into the third and fourth year. Understandably the staff would like to know what their roles and responsibilities will be. Will the program be school based or center based? What is the maximum number of students that a learning coordinator can work with and still maintain academic excellence?

The recommendations of the task force in May should help to alleviate some of these apprehensions.

State Networking and Dissemination

The most noteworthy accomplishment to date of the State networking and dissemination component of the EBCE Project is the support and enthusiasm generated throughout Maryland for Experienced-Based Career Education. Early in this second year, meetings were conducted to explain EBCE to the 23 Maryland counties. Each county was invited to send a representative. After the initial meetings, two sites were selected, Anne Arundel County and Washington County, to conduct in-depth sessions on the four national models. The five-day workshops spent one day on each model, reserving the last day for discussion and questions. As a result of these workshops, six counties were tentatively selected who could implement an EBCE project in September of 1978. At the present time, representatives from these counties are receiving in depth training in preparation for implementing the projects in their counties. The State Networking Coordinator and members of the State Management Team will continue to serve in a technical assistance capacity to insure successful implementation of EBCE projects at the local level.

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* These interviews were completed in mid-April. Similar concerns were expressed.

APPENDIX B

INSTRUMENTS

Dear Participant,

As a former "Experienced Based Career Education Student" we would appreciate your response to the following questions. This will enable us to better serve those students now enrolled and future enrollees. Please take time to complete this "brief" questionnaire.

Education:

1. Are you presently in school? ____________

2. If in school,please (x) one of the following:

   ( ) junior college
   ( ) college
   ( ) vocational school
   ( ) business/clerical
   ( ) other: please specify ______________________

3. What course of study are you pursuing?

   ____

4. Did your experience in the EBCE program have an influence on your choice of studies? ______________________________

   ____

5. As you now view the program, was it beneficial in aiding your choice of career? ______________________________

6. Do you plan to pursue a career after graduation that is similar to your career education experience in the EBCE program?

   ____

Employment:

1. Are you employed? ______________________________

2. Part time ______________ or Full time ______________

3. If employed, is it in an area related to your EBCE experience?

   ____

4. Do you view the EBCE program as being beneficial to your career choice?

   ____

   If so, how? ______________________________________

5. How could the program have better prepared you for the job you are now in? ____________________

____

Not Employed/Not in School:

1. As you now view the EBCE program, could it have better served your present needs? ____________________

If so, please specify how. ____________________

____

All:
In retrospect (looking back)

1. Did the program increase your ability to work with others?

No Effect				Very Effective
1	2	3	4	5

2. How beneficial were the "on-site experiences" in an actual work situation?

No benefit				Very beneficial
1	2	3	4	5

3. How do you view the EBCE experience?

Of no value				Very worthwhile
1	2	3	4	5

4. Did the EBCE program affect your attitude towards work?

No affect			Great deal of affect	
1	2	3	4	5

5. What are your occupational plans now?

None				Very firm
1	2	3	4	5

6. What are themost desirable aspects of the program?

____

____

7. What aspects were least desirable?

Academic Preparation:

One question being asked nationally concerns the quality of academic preparation in this kind of program. Please comment on the following question as it relates to your experience in the EBCE project.

1. How do you now view the academic curriculum provided in the EBCE Program? Was it:

Inadequate		adequate		more than adequate
1	2	3	4	5

If inadequate, please explain the specific weaknesses

Additional comments:

Please rank the following statements in relation to how you as a student view the (EBCE) Programs effectiveness by placing an (X) in the appropriate blank that best describes your feeling.

	Strongly Disagree 1	Disagree 2	Neutral 3	Agree 4	Strongly Agree 5
1. The program has increased your motivation level toward school.	___	___	___	___	___
2. It exposed you to the world of work and thus aided your decision-making process.	___	___	___	___	___
3. You were given the opportunity to pursue your interest area.	___	___	___	___	___
4. The objectives of the EBCE Program were clearly defined to you.	___	___	___	___	___
5. You were aided in choosing a career.	___	___	___	___	___
6. By participating in the program you acquired a saleable skill necessary for employment after graduation.	___	___	___	___	___
7. You now have a better understanding of the world of work i.e. job availability and necessary requirements.	___	___	___	___	___
8. The program increased your ability to work with others.	___	___	___	___	___
9, The one-to-one relationship with the learning coordinator has been adequate.	___	___	___	___	___
10. On-site experience in actual work situations was provided.	___	___	___	___	___
11. The experience was worthwhile and worth the time involved.	___	___	___	___	___

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
	1	2	3	4	5
12. You are now more aware of your individual aptitude for specific jobs or career aspirations.	____	____	____	____	____
13. A greater chance of community employment now exists for you as a result of your participation in ECBE.	____	____	____	____	____
	Much Worse				Much Better
14. How well did the EBCE program compare to your past school experiences?	1 ____	2 ____	3 ____	4 ____	5 ____
	Poor				Excellent
15. How would you rate the EBCE staff in relation to past teachers?	1 ____	2 ____	3 ____	4 ____	5 ____
	None				Much More
16. As a result of the program, you have talked with your parents concerning your goals.	1 ____	2 ____	3 ____	4 ____	5 ____
	Definitely Yes				Definitely No
17. Your self perceptions have improved.	1 ____	2 ____	3 ____	4 ____	5 ____
18. Your attitudes towards self have been enhanced.	____	____	____	____	____
19. Your attitude towards work has improved.	____	____	____	____	____
20. Your ability to solve problems has increased.	____	____	____	____	____
21. The (EBCE) program aided you in improving interpersonal social skills.	____	____	____	____	____

	None 1	2	3	4	Very firm 5
22. As a result of the program your occupational plans are:	___	___	___	___	___

23. How would you change the EBCE program to make it more effective?________________________________
____.

24. What are the weakest or least desirable aspects of the program?________________________________
____.

25. What did you like most about the program?____
____.

26. Additional comments:____
____
____.

RESOURCE PERSON QUESTIONNAIRE
1978-79 SCHOOL YEAR
EXPERIENCED BASED CAREER EDUCATION (EBCE)

Questions

1. Did the EBCE staff provide you with the necessary information to help you direct students' activities at your site?

   Inadequate ______________ Adequate ______________ More than adequate __________

2. Did the EBCE staff:

	Never	Sometimes	Always
Show you the Student Activity Sheet(s)	____	____	____
Show you the Student Program Profile	____	____	____
Show you the type of products expected from student	____	____	____
Explain reason for the particular placement	____	____	____
Provide you with feedback on student's progress	____	____	____

3. Which of the following supportive services do you (or others at your site) provide for the Experience-Based Career Education (EBCE) program students? (Check each appropriate category.)

	Frequently	Occassionally	Seldom	Never
Do you talk about job opportunities?	____	____	____	____
Do you talk about activities at your site?	____	____	____	____
Do you evaluate individual students' assignments?	____	____	____	____
Do you talk about goal aspirations?	____	____	____	____
Do you talk about career aspirations?	____	____	____	____

	Frequently	Occassionally	Seldom	Never
Do you assist students in non-job related assignments?	____	____	____	____
Do you supervise students to perform a specific job-related task at your site?	____	____	____	____
Do you help plan student assignments?	____	____	____	____

4. How do students spend their time at your site?

	Frequently	Occassionally	Seldom	Never
Observing site activities	____	____	____	____
Researching from site activities	____	____	____	____
Actively performing site activities	____	____	____	____
Talking with you	____	____	____	____
Talking with other site personnel	____	____	____	____
Individual study	____	____	____	____

5. What is the degree of interest shown by the EBCE students at your site?

None				Great Deal
1	2	3	4	5

6. Based on EBCE students placed at your site, do you feel these students showed interest in the concept of EBCE?

Definitely No				Definitely Yes
1	2	3	4	5

7. How have the majority of employees at your site reacted to the EBCE students placed at your site?

Very Negatively	Negatively		Favorably	Very Favorably
1	2	3	4	5

8. How has top level management reacted to the EBCE students placed here?

Very Negatively	Negatively		Favorably	Very Favorably
1	2	3	4	5

9. Have you been satisfied with the feedback that you received relating to what happens to the student after he leaves your site?

Very Dissatisfied	Dissatisfied		Pleased	Very Pleased
1	2	3	4	5

10. Do you think your company will continue working with the EBCE project during the next couple of years?

Yes	No	Don't Know
___	___	___

11. Based on the students and staff you've met, how effective do you feel the program was?

Totally Ineffective	Ineffective		Effective	Very Effective
1	2	3	4	5

12. Do you feel the program functioned as you were led to believe when you were recruited as an employer site?

Yes	No	Don't Know
___	___	___

13. What do you feel the strengths of the EBCE Program are?

14. What do you feel the weaknesses of the EBCE Program are?

15. To what extent has the EBCE Program had an impact on . . . . . . ?

	How Much Impact				Value of Impact		
	No Impact	Some Impact	Much Impact	Don't Know	Good Impact	Bad Impact	Don't Know
a. Quality of work performed by regular employees	____	____	____	____	____	____	____
b. Amount of work performed by regular employees	____	____	____	____	____	____	____
c. Company hiring practices	____	____	____	____	____	____	____
d. Company training practices	____	____	____	____	____	____	____

16. How many years have you been participating in the Allegany County EBCE program as a resource person?

1 Year ____

2 Years

3 Years

PARENT INFORMATION FORM

1. What is your son/daughter doing now?

2. In your opinion, would your son/daughter be doing this had he/she not been involved in the EBCE program?

   Yes_____ No_____

3. What influence do you think the EBCE program had on your son's/daughter's vocational choice?

4. Do you think the EBCE program was more valuable for your child than a tradional school program?

   Yes_____ No_____

   If yes: What do you think the EBCE Program offered your child that a "traditional" school program does not?

   If no: What do you think the EBCE program did not offer your child that a "traditional" program does?

5. Do you think if your child had it to do over that he/she would opt the EBCE Program over traditional studies?

   Yes_____ No_____

6. Could you list what you felt to be the strengths of the EBCE program?

7. What improvements would you suggest?

8. What major benefits was the EBCE Program for your child?

MARYLAND STATE NETWORKING

CAREER EDUCATION WORKSHOP

A. Please respond to each of the following questions:

1. Do you feel that anything of value happened during this workshop?

   ( ) Yes, quite a lot.
   ( ) Yes, something.
   ( ) Not much.
   ( ) Nothing.

2. If you found something of value in this workshop, does any particular happening or idea stand out in your mind?

   ( ) Nothing of value happened.
   ( ) It was a valuable workshop, but no particular thing stands out.
   ( ) Yes, something does stand out for me, namely:

3. If you found something in this workshop to be of no value, was there a particular happening or idea that stands out in your mind as being valueless?

   ( ) Most everything was of some value.
   ( ) Some parts of the workshop had no value, but no particular things stands out.
   ( ) Yes, something stands out for me as having no value, namely:

4. Was there any feature about the way this group operated that you thought particularly effective?

( ) No.

( ) Yes, namely:

5. Was there any feature about the way this group operated that you thought particularly ineffective?

( ) No.

( ) Yes, namely:

B. Answer the items according to your own opinions about the workshop. There are no right answers. Circle the number on the scale that corresponds to your opinion.

1. Goals of the workshop

Poor ____1________2______3______4______5____Good
(unclear: diverse; conflicting; unacceptable)
(clear; shared by all, ensorsed with enthusiasm)

2. Participation in the workshop

Poor ___1___2___3___4___5___Good

(few dominate; some passive; some not listened to; several talk at once or interrupt)	(all get in; all are really listened to; open and lively discussion)

3. Leadership of the workshop

Poor ___1___2___3___4___5___Good

(group needs for leadership not met; group depends too much on one or a few persons; no direction or no leadership)	(a sense of direction; leaders allowed to emerge as needs for leadership arise; everyone feels free to volunteer to lead)

4. Your feelings during the workshop

Poor___1___2___3___4___5___Good

(I was unable to express my feelings; my feelings were ignored; my feelings were criticized)	(I freely expressed my feelings; I felt support from the participants)

5. Organization of the workshop

Poor___1___2___3___4___5___Good

(it was chaotic; it was too tightly controlled; very poorly done; I felt manipulated)	(it was very well organized; it was flexible enough so we were able to influence it; all

6. Attitude about the workshop

Poor___1___2___3___4___5___Good

(boring; it was a waste of time; I don't like the way it was presented; disliked it)	(interesting; was helpful; liked it)

7. Content of the workshop

Poor___1___2___3___4___5___Good

(uninstructional; did not learn much, not informative; too much process, not enough content)	(learned a lot; was informative; I'll be able to use the content; content appropriate to our needs)

8. Productivity of the workshop

Poor___1___2___3___4___5___Good

(didn't accomplish much; no useful ideas emerged; it got us nowhere)	(got a lot done; very fruitful; something will come of this workshop)

C. What suggestions or criticisms do you have for improving the workshop?

---

1. Runkel, Philip J.; and McGrath, Joseph E.
   1972. Research on human behavior; a systematic guide to method.
   New York Holt, Rinehart, and Winstone.

2. Schein, Edgar H.
   1969. Process consultation; its role in organizational development.
   Reading, Mass.: Addison - Wesley.

APPENDIX C

SEX BIAS AND SEX-ROLE STEREOTYPING
RATING SHEET

SUPPLEMENTAL RATING SHEET

SEX BIAS AND SEX-ROLE STEREOTYPING

VOCATIONAL DEMONSTRATION PROJECTS

In the absence of the ability of the Vocational Demonstration Projects Coordinator to achieve policy clarification to the contrary, monitorship of the Federally-administered vocational demonstration projects will be achieved during the three years of project operation on the following criteria. It is regrettable that policy clarification was not possible on such matters as staffing patterns and employment practices of the project and the analysis of evaluation data for the differential effects on project participants by race and by sex. Local projects will be expected to monitor their own activities in these two respects. It should be pointed out to them that the differential measurement of the project effects on participants by race and by sex would be the most effective means they have for demonstrating that they have truly eliminated sex bias and sex-role stereotyping.

/ PROJECT ASSIGNMENTS

1. The project admits students without regard to whether they are male or female. Yes 3 No –
2. Recruitment procedures and materials are free from sex bias and sex-role stereotyping. Yes 4 No –
3. Facilities (laboratories, classrooms, showers and other restroom facilities) are equally and comparably available to both sexes. Yes 4 No –
4. Admissions rules with respect to actual or potential marital status are nondiscriminatory on the basis of sex. Yes 4 No –
5. Students' pregnancy, childbirth, false pregnancy, and recovery therefrom is treated in the same manner as any other temporary disability of a student or potential student. Yes 4 No –

6. The student population in the project with respect to sexes approximates that of the sending schools to the project. Yes 1 No 2 1 ?

7. Special recruitment activities have been undertaken to correct disproportionate enrollments. Yes - No 3 1 ?

8. Outreach programs are provided to recruit an underrepresented sex into vocational education programs and remedial assistance is provided, as needed, to facilitate their success. Yes 1 No 1 2 ? (Appropriate to Priority III)

9. Course and program prerequisites are based on necessary conditions and are not designed/created to exclude one sex or the other. Yes 3 No - 1 ?

2 THE NATURE AND RANGE OF ASSIGNMENTS

1. All instructional programs supported under the project are integrated on the basis of sex. Yes 4 No -

2. Classroom, laboratory and/or community work is structured in such a fashion as to integrate and to treat the sexes identically in the assignment of learning activites. Yes 2 No 1 1 ? -

3. Approximately equal financial resources are made available to support men and women students in their pursuit of educational goals (work study, scholarships, tuition grants, etc.) in each program/occupational area supported under the project. Yes 2 No 1 1 ? (Appropriate to Priority III)

4. The same opportunities are open to both sexes for the credentialization of learning experiences which are either internal or external to the school. Yes 4 No -

5. Attention is given to the issues of sex bias, sex-role stereotyping, and sex discrimination in employer/community resource recruitment and training. Yes 4 No -

6. Boys and girls enrolled in or employed through cooperative vocational education or work study programs earn approximately the same salaries. Yes 2 No ____ 2 NA (Appropriate to Priority III)

7. Boys and girls completing vocational education programs supported under this project earn approximately equal beginning salaries. Yes 1 No ____ 2, NA? (Appropriate to Priority III)

8. Classrooms and laboratories are decorated (pictures, posters, bulletin boards, etc.) with attention to and portrayal of both sexes in a variety of nonstereotyped roles and activities. Yes 3 No 1

3 THE BEHAVIOR OF PROJECT TEACHERS, COUNSELORS AND OTHER STAFF TOWARD STUDENTS IN THE PROJECT

1. Rewards and punishments are provided as they are deemed appropriate to the behavior displayed by the student, not as they are deemed appropriate to the sex of the student. Yes 4 No -

2. Teachers and others avoid using sexist terms in referring to students and in describing their behavior. Yes 3 No ____ 1?

3. Rules and regulations on appropriate dress and grooming apply equally to the sexes and they are equally enforced. Yes ✓ No –

4. Men and women students are equally encouraged to engage in:
   --analytical thinking
   --independent/dependent activities
   --the display of fearfulness/fearlessness
   --the display of submissiveness/aggressiveness
   --the display of characteristics and patterns of behavior which are deemed essential to the care and nurturance of a family. Yes ✓ No –

5. Project staff and teachers do not permit the differentiation of skills to be perpetuated by sex when the total command of all skills will be essential to mastery/employment; i.e., classroom activities and assignments are described/prescribed without regard for the sex of the student. Yes ✓ No –

6. Academic/occupational course expectations are the same without regard for the sex of the student. Yes ✓ No –

7. Activities are avoided which tend to exclude the participation or comfort of students from single-parent families; i.e., a "parent" is equally treasured, whether of one sex or the other. Yes ✓ No –

8. Students are equally encouraged to pursue their areas of strength or to correct their areas of weakness without regard for their sex. Yes ✓ No –

9. Through classroom and laboratory activities, students are helped to recognize and minimize the misimpressions which currently exist in their textbooks and instructional materials. Yes 4 No –

10. As great emphasis is placed on girls' achievements as on their looking "fashionable and effiminate" and as great emphasis is placed on boys' achievements as on their looking "athletic and masculine." Yes / No / 2 ?

11. The project has provided staff training on bias, stereotyping, and/or discrimination in their treatment of students and on its implications for their students. Yes 4 No –

4 COUNSELING AND GUIDANCE PROGRAMS

1. Counselors are equally available to male and female students on request. Yes 2 No ✓ 2?

2. Male and female students or potential students are referred to counselors in approximately equal numbers. Yes / No / 2?

3. Counselors recommend programs and courses without regard to the sex of the inquiring student. Yes 2 No / 1?

4. Career information materials have been excluded from counseling and guidance programs when they contain sex bias and sex-role stereotyping. Yes 3 No – 1?

5. Career counseling programs provide role models of men and women in a variety of jobs and occupations (including those which are non-traditional to their sex.) Yes 4 No -

6. Interest inventories and other appraisal instruments which contain sex bias have been eliminated from use or steps have been taken to reduce the ill effects of their bias on occupational aspiration and occupational choice. Yes 4 No -

7. As great an emphasis is placed on the career choices and career decisions of women as on the same decisions of men. Yes 4 No -

8. Women and men students are provided information about their rights to equal educational and employment opportunities under the law and are provided simulated activities for dealing with sexism and discrimination. Yes 3 No ____ 1 ?

9. Programs are planned and conducted for parents which assist them in working with their sons and daughters on career decisions, especially with respect to sex bias and sex-role stereotyping they may encounter. Yes - No 4

0. Guidance and counseling and placement and follow-up records are maintained and are reviewed periodically for the differential impacts of the instructional, counseling and guidance, and placement programs on male and female school leavers or completers. Yes 3 No 1

11. Students are informed of changing employment practices which previously operated to restrict career choice. Yes 4 No -

12. Students are encouraged to value and to develop intellectual abilities without regard to sex. Yes 4 No -

13. All students are helped to explore the advantages and disadvantages of course preferences and career choices, including such aspects as:
   --the income levels associated with various skills and knowledges in the society.
   --individual freedom of choice as associated with income and the various skills and knowledges in the society
   --personal satisfaction that can occur from working in areas of greatest individual interest and potential. Yes 4 No -

14. Within programs of career counseling and guidance, students are helped to:
   --discuss what are "desirable human characteristics" without regard to sex.
   --differentiate between their own concepts of "the ideal man" and "the ideal woman" and those presented in the media
   --identify and analyze sexism in career information materials and in the media.
   --differentiate between the social status of men and women as it relates to the current requirements of the labor market.
   --investigate and analyze subtle forms of sex bias and sex-role stereotyping in their own daily lives.

14. Continued.

--understand the impact of sex bias and stereotyping on each other--male and female--and on their relationships to each other.

--recognize their own sex biases and the limitations they may be imposing on themselves. Yes 3½ No ½

15. Special programs of counseling, guidance, placement, and peer support are provided young people who select nontraditional career and educational pursuits. Yes 3 No 1

16. Equal emphasis is placed on sources of financial support for further education. Where unequal resources exist in the society for one of the sexes, that sex is provided more extensive support in identifying and securing support. Yes 4 No -

17. Guidance, counseling, and placement personnel have been provided the inservice training necessary to the delivery of sex-fair services to students. Yes 3 No - 1?

5 CURRICULUM AND INSTRUCTIONAL MATERIAL

1. Teachers have been provided the training and information necessary to eliminate sex bias and sex-role stereotyping from their curriculum (instruction and materials). Yes 4 No -

2. Students are encouraged to make critical analyses of the educational activities and materials they are furnished for sex bias and sex-role stereotyping. Yes 4 No -

3. Social science, history, physical science and mathematics courses include the contributions and roles of women in the society on an equal basis with the contributions and roles of men. 1? Yes 3 No ____ (Appropriate to Priority I)

4. Literature courses place an equal emphasis on the contributions of female authors. Yes 4 No - (Appropriate to Priority I)

5. Health, physical education, and sex education courses treat the two sexes with equal respect and promote the concept of equal responsibility for birth control, venereal disease, abortion, adoption, etc. in the society. Yes ____ No 1 2NA 1? (Appropriate to Priority I)

6. All educational processes and materials have been reviewed and "sexist" humor has been eliminated. Yes 3 No ____ 1?

7. Neither sex is ridiculed, insulted, or harrassed in educational processes and materials. Yes 3 No 1

8. Curriculum areas devoted to social problems give adequate coverage to inequities for males and females in marriage laws, in taxes and social services, and in education and the job market. Yes 1 No 3

9. All curriculum and instructional materials (including audio-visuals) have been reviewed and the nature and extent of sex bias and sex-role stereotyping has been analyzed.

Yes 4 No -

. Procedures have been established for the review of all curriculum and instructional materials being purchased or being developed for sex bias and sex-role stereotyping.

Yes 2 No 2

. Where sex bias or sex-role stereotyping is identified in materials currently in use or in those being purchased, supplementary materials and procedures are being used to correct the misimpressions being given or being reinforced for the learner.

Yes 2 No 1 1 ?

Graphics, pictures, and audio-visuals used in the classrooms portray groups of people (and individuals) in non-stereotyped roles.

--An equal number of portrayals of men and women engaged in the work of the home and in related work (men and women engaged in cooking, cleaning, child care, home and lawn maintenance and repair, nursing, and teaching in the elementary schools).

Yes 1 No 3

--An equal number of men and women (including mothers and fathers) are portrayed as being engaged in skilled, technical, and professional occupations and in positions or situations of authority.

Yes 2 No 2

--An equal number of men and women are portrayed in "active" and "passive" roles and in "dependent" and "independent" roles (art, music, crafts, drama, in strenuous physical situations, traveling, operating machines, and constructing things.) Yes 1 No 3

--An equal number of men and women are portrayed as being older, wiser, stronger, more compassionate, more perceptive, rougher and ruder, more sensitive and more emotional than their peers of the opposite sex. Yes 1 No 3

--An equal number of men and women are portrayed as cooperating with each other and with their peers of the opposite sex. Yes 1 No 3

13. The content of curriculum and instructional materials used in the classrooms:

--Contains language that has been adjusted to eliminate a one-gender reference to the exclusion or the minimizing of the other and other stereotypical language has been eliminated or neutralized. Yes 1 No 2 1?

--Sets forth an equal number of males and females as the leading character. Yes 1 No 2 1?

--Reflects genuine friendships and activities of cooperation between the sexes. Yes 1 No 2 1?

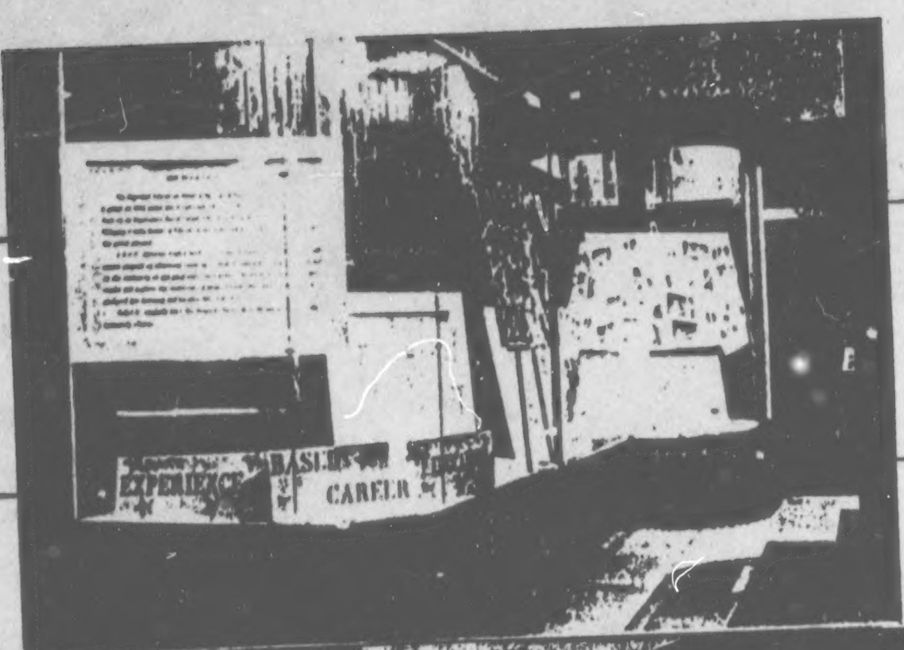
--Treats praiseworthy traits--strength, compassion, initiative, warmth, perceptiveness, courage, and resourcefulness--as human traits rather than as "masculine" or "feminine" traits. Yes 2 No 1 1?

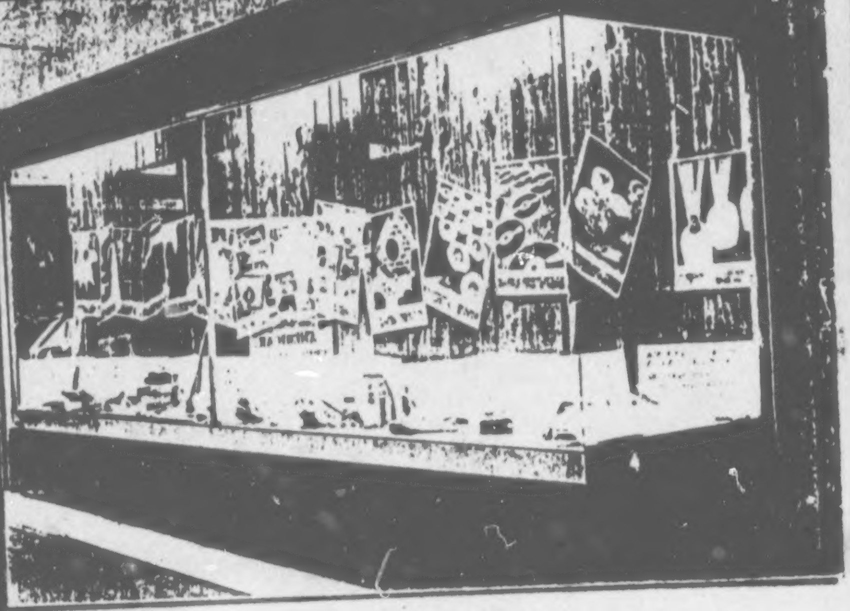
--includes materials on single-parent families, families with working mothers, extended families, single people, childless couples, and old people in realistic and positive ways.

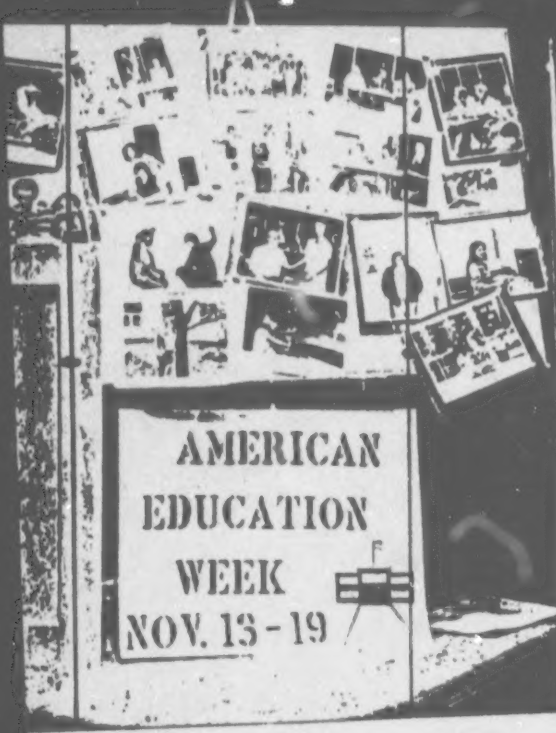
Yes / No 3

APPENDIX D

PUBLICITY ACTIVITY


EXPERIENCE
BASICS
CAREER

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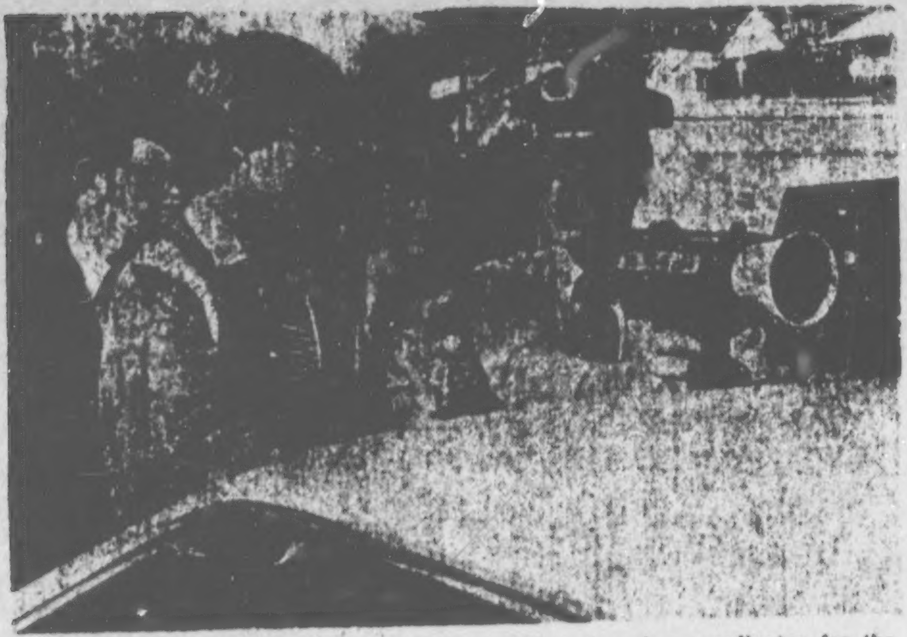


LEARNING BY EXPERIENCE — Thomas Elliott, learning coordinator for the Experience Based Career Education Program, observes as identical twins, Art and Bill Windemuth, are shown how a traffic radar device operates. Sgt. Byron Schulten of the Cumberland City Police, is shown demonstrating the device.

Career Exploration

Students Receive On-Site Training

A visitor to the Cumberland City Police Station during the 4 p.m. to midnight shift, may think he is seeing double.

Art and Bill Windemuth, identical twins are assigned to the local police under the Allegany County Board of Education's Experienced Based Career Education Program (EBCE).

EBCE is a program for seniors which combines on site career exploration with an academic program and career counseling, according to Dana George, program director. EBCE, which is open to all high schools in the county, graduated 24 students last year and has a total of 30 participating this year.

Over 150 work sites have agreed to assist. These sites range all the way from a paper mill to a funeral home. Areas in which the students may work include education, industry, government agencies, social agencies, sales and service businesses, unions, environmental agencies, medicine and utilities.

The Windemuth twins, sons of Mr. and Mrs. Arthur A. Windemuth of Winchester Road, come to the program from Allegany High School. They show a pronounced interest in law enforcement and are considering following in the footsteps of their uncle and brother-in-law who are both police officers in Fairfax County, Va.

The young men have completed four weeks on the day shift and are working evenings in order to get a better idea of the many faces of police work. After 13 weeks they will move on to another work site.

Further [illegible]

Student Training Course Reviewed

Representatives of the Maryland State Department of Education recently visited to Experience-Based Career Education Program in Allegany County to see the program in action and explore correlations between the local program and other state programs such as Project Basic.

The visitation program included definitions of staff roles and functions, evaluation of the first program year, a panel discussion by parents, students and school principals, resource people, the advisory council and state visits.

Local community participants were Mrs. Nancy Sine and Mrs. Betty Windemuth, parents of students in the program; Art and Bill Windemuth, students, and Sister Margaret Dougherty, co-chairman of the advisory committee.

Resource people included Armand Barazio, administrative manager of the radiology department of Sacred Heart Hospital; Sergeant Byron Schulten,

Student Training

(Continued From Page 18)

Cumberland Police Department, and William Helmick, Allegany Community College.

Board of Education personnel attending were Dr. Wayne W. Hill, superintendent of schools; Robert Scarcelli, principal of Fort Hill High School; John Frank, coordinator of federal programs; Glenn U. Hanna, supervisor of pupil personnel, and Joseph Pellerzi, assistant superintendent for instruction. George Allen and Dr. Eugene Hall represented the Regional Education Service Agency.

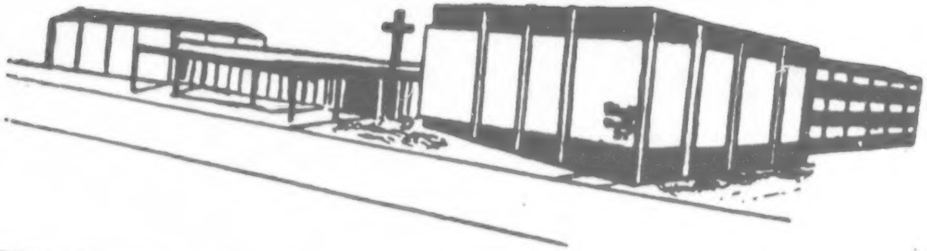
EBCE staff participants were Mrs. Allen B. George, project manager; James W. Moore Jr., site analyst; Tom Elliott and Linda Golden, learning coordinators, Leona Hirtle, secretary and transportation coordinator, and James Dickel, para-

Educators Check Students' Progress

Luke mill of Westvaco, Inc., was one of the training sites visited by Maryland State Department of Education as part of its review of the Experience-Based Career Education Program. From left are Raymond Bourdeau, Westvaco trainee manager; Paul Barkley, Westvaco paper test foreman; Andy Mason, State Department of Education; Jonnie Bartlett, EBCE student; Norman Hough, State Department of Education, and Jeff Morris, EBCE student.

6—The Cumberland News, Wednesday, November 30, 197

Vista



Vol. XII No. 2

Bishop Walsh High School Cumberland, Maryland 21502

Tuesday, December 20, 1977

background information to what we have been studying." The class visited with Dr. Valdes, a urologist, to see what some material produced in excess does to the body." Greise's meat market was visited to view the nature of his work. He also demonstrated some of the equipment he uses and some of the chemical tests he performs.

Miss Dunkle at the hospital discussed with the class what her job as dietician requires her to do. The students learned of her need to create a balanced yet appetizing dinner and also of some patients special dietary requirements.

es Money, nowledge

Although the NHS received a part of the profit, NHS president Mary Ann Coyle pointed out, "The purpose of the book fair was not to make money, but to encourage the students to read."

It is possible that the book fair could become a yearly NHS project to make reading popular with BW students. Approximately $500 worth of book orders were received. The books were delivered the week of November 28.

Calendar

Jan. 2 Classes resume after Christmas vacation.

Jan. 6 Student Council dance.

Jan. 20 End of first semester and Student Council dance.

Jan. 23 Semester break and school holiday.

Jan. 28 SAT test at Allegany High School.

After Back Operation

"It was one of those things that had to be done," reflects **Jana Smith**, a sophomore at BW, who was out of school for eight months last year due to a serious back operation.

"I was out of school because I had to have an operation on my spine." According to Jana, the operation was a perfect success. She was at The Children's Hospital in Baltimore, Maryland. After her operation she said, "I had to be in a walking cast from October to April of 1977; I really missed a lot of school."

Of course, Jana was disappointed about missing school. "I could hardly believe it at first. I found it a hard thing to accept. Most of all it was a big shock and let down."

Although Jana was absent from a lot of school, she did not fail her freshman year. *During* her illness she was tutored by Miss Jane Wendelin, a former Walsh teacher. "Miss Wendelin brought me up to date on the work that I had missed," said Jana. "I was not going to have to repeat the 9th grade. I liked being tutored, but it was not better than going to school."

Now that Jana is back, she says she is glad to be here. "I missed everybody. I wanted to come back as soon as possible. I was just getting to know my teachers, friends, and the way around the school, and I had to leave so soon after I had become adjusted."

All her friends and teachers kept in touch with her by letter, cards, and phone calls. "I really want to thank all of you who showed some great concern for me during my illness. *I really* appreciated it very much."

EBCE Provides Good Experiences

Tara Gingerich

Four BW seniors are currently involved in the second year of the Experience Based Career Education Program.

Rather than attend school, Theresa Divico, Vicki Powers, Greg Gellner and John Sine are spending their senior year at various "sites"-local businesses that are offering the students a more realistic view of the career world. They spend anywhere from 3 to 13 weeks on one site. If they wish to stay at a particular site longer than 13 weeks, they must be employed. The students have the option of pursuing another site in their field of interest or moving on to a different area.

This year, the program runs for the full school year instead of just the second semester as it did last year. The students enrolled in the program are still considered BW students and are able to participate in any school activity.

Both the students and the program's moderator, Mrs. Lana Kirby, are happy with the program. Theresa Divico, currently working at the County Sheriff's Office, likes the program and thinks it's a good experience in interesting careers.

Greg Gellner, who is working at Willets Travel Agency as a bus mechanic, says he'd recommend the program to anybody and thinks "everybody should get a shot at it." Greg added that he feels more independent from other students in a regular school situation.

Vicki Powers agrees with Greg, saying she thinks the senior class should take a week to explore some type of field that they are interested in to find out what it's really like. She also notes that the program is a big change from school.

The only complaint the students have is that they are not kept informed of what's happening in the BW community.

On the first Monday of every month, all the kids in the program get together for a seminar at which they talk about the current places where they are working. Vicki and Greg noted that the kids in the program have become close as a result.

All the students prefer the program to school because they feel that they are learning a great deal.

Team Reviews EBCE, Plans Networking

Representatives of the Maryland State Department of Education focused their attention on career education recently when they reviewed the Experience-Based Career Education (EBCE) Program in Allegany County.

The educators, members of the EBCE management committee, came to Western Maryland to observe the alternative academic program in action and to explore correlations between the local program and other such state programs.

During their visit, they met with the EBCE staff, community participants, students, resource people and representatives of the Allegany County Board of Education and visited several EBCE training sites.

The visitation program included definitions of staff roles and functions, evaluation of the first program year, a panel discussion by parents, students and school principals, resource persons, the advisory council and state visitors.

The EBCE program is helping to bridge the gap between the classroom and the community and is now in the process of being networked through the state.

According to Mrs. Dana George, Allegany County Project Manager, the individual and academic program utilizes the career exploration site experiences as an integral component of the learning process. Students receive academic credit while they explore various careers in actual work settings and master basic skills necessary for business success.

Instead of attending classes in a regular high school setting, students "investigate" the different places to work in the community, select those they want to learn more about, and spend from three to thirteen weeks, without pay, exploring careers at their selected job sites.

EBCE is "career awareness" and is not designed to prepare students for specific jobs.

The program offers something to the student who wants to explore the "real world" outside the classroom or career options through direct experience, the college-bound student who wants to explore a tentative career choice or the student who wants information to pursue a career interest.

Members of the EBCE management committee, headed by E. Niel Carey, Career Education Unit, Maryland State Department of Education, are formulating plans for networking the program thoughout the state.

Others on the committee are Eugene Hall, EBCE Project Director; H. Norman Hough, Office of Equal Opportunity; Andrew Mason, Compensatory Urban and Supplemental Programs, Maryland State Department of Education; Joseph Morton, Project BASIC; Kenneth Twentey, Division of Vocational Education, Maryland State Department of Education; James Wilson, EBCE State Networking Coordinator; Niel Carey, Chairman of Career Education, Maryland State Department of Education; Theophil K. Muellen, Assistant State Superintendent of Instruction, Maryland State Department of Education; Floyd L. Stead, Third-Party Evaluator, West Virginia University; Woodrow Grant, Coordinator of Human Relations, Office of Equal Opportunity; and Joan Maynard, Specialist in Special Education, Maryland State Department of Education.

The Board of Directors of RESA recently approved a research proposal for career education for the handicapped in Appalachian Maryland, an outgrowth of a recommendation by the management team that provisions be made for including the handicapped in such projects as EBCE.

The Division of Instruction and of Special Education at the Maryland State Department of Education are collaborating with RESA in the effort to increase the participation of handicapped students in all aspects of the regular instructional program.

Goals of the proposed project include determining the functional characteristics of handicapped students in Western Maryland, their career education needs, the extent to which these needs are being met, the effectiveness of these experiences, conditions preventing their participation in EBCE programs, the most effective programs for handicapped students and developing a formal EBCE model for handicapped students.

Both Linda J. Jacobs, Assistant State Superintendent, Division of Special Education, and Theophil K. Muellen, Assistant State Superintendent in Instruction, have endorsed the proposal which has now been submitted to the Bureau of Education for the Handicapped.

"It is my belief that this proposal...could make a significant contribution toward providing information that would be invaluable in developing an exemplary career education model for Maryland's handicapped students," Ms. Jacobs said.

Grant Adds Program to Fourth Grade

The Regional Education Service Agency was awarded a $34 thousand grant by the Appalachian Regional Commission for instructional materials to initiate the fourth grade curriculum of the "Berkeley Project." The fourth grade curriculum of the School Health Education Curriculum Project, which relates to the digestive system, has already been piloted in the region.

About $390 thousand of Federal and local funds were used in the successful implementation of the fifth, sixth, and seventh grade curriculum between 1974 and 1977. According to Ed Firlie, RESA coordinator, some 11,500 students are now receiving this program at an annual cost of only $1 per student.

In December, RESA held a workshop to review the results of the first three year's efforts. Administrators, supervisors and principals agreed that the program had been enthusiastically received by students, parents, teachers, and the community.

Also in the review of the program they cited material distribution, storage, printing and staff turnover among the difficulties of the program but were able to agree on satisfactory methods of correcting these problems.

Satellite Courses . . .

Continued from page 1

topics will include definition, identification and treatment for the gifted and talented, teaching strategies and program development for gifted and talented education, and the gifted and talented handicapped and minorities.

"Designing Success Strategies" will be broadcast on Thursdays from 6-9 p.m. beginning January 26 and continuing through April 27.

Dr. William Glasser, renowned educator, psychiatrist and author, will present techniques for promoting positive classroom interaction. Through Reality Therapy, plans will be studied for helping failing students to achieve a "success identity" and a commitment to action.

The AESP is coordinated in the tri-state region under a joint agreement administered through the Tri-State Regional Resource Institute. Working together in the AESP are RESA of Appalachian Maryland, RESA VIII of West Virginia and the Southern Alleghenies Planning and Development Commission.

Administrators of the program are Frank Peto, cluster director, RESA Maryland; and coordinators Hilda Lee of the Garrett County Board of Education; Sara Zenge of Washington County Board of Education; Nancy Kilmon of RESA VIII; and Robert Carey of the Southern Alleghenies Planning and Development Commission.

Additional information may be obtained by phoning the AESP Cluster Director at (301) 729-8155.

APPENDIX E

EBCE ADVISORY COUNCIL MINUTES

Dr. Lyons Named Dean

FSC Graduate Program Expands

Dr. Paul R. Lyons, principal administrator of graduate programs at Frostburg State College, has been named dean of the graduate school for the newly designated Graduate School at FSC.

Kenneth L. Braitman, coordinator of veterans' affairs, will assume the additional responsibilities of assistant to the dean of the graduate school.

In announcing the changes, Dr. Nelson P. Guild, president of FSC, said the expanded responsibilities of the Graduate School will include: administrative responsibility for the general supervision of graduate program heads; participation in the recruitment and selection of faculty who will have graduate teaching responsibilities; and responsibility for the development of a system of evaluation for graduate programs.

Advanced degrees are now offered by the college in six areas including master of education in 12 areas of concentration, master of science in management, master of science in biology, master of science in fisheries management, master of science in wildlife management and master of science in counseling psychology.

The college has served the graduate education needs of Western Maryland and environs for more than 20 years and the emphasis on addressing regional needs will continue, according to Dr. Guild.

This semester 616 persons are enrolled in graduate course work with 155 persons receiving master's degrees at commencement exercises May 14.

Graduate study in the education profession at FSC provides an opportunity for college graduates holding the baccalaureate degree to continue formal education in order to pursue a master's degree based on a definitive plan of study.

Areas of concentration include elementary and secondary administration, art education, biology, elementary education, geography, guidance and counseling, history, mathematics, physical education, reading and social science.

The Center for Management Development offers a program leading to the degree of master of science in management. The primary objective of the program is to provide individuals with the opportunity to develop the skills and concepts of general managers and administrators. With the acquisition of these basic managerial skills and concepts, the student has a framework for the ongoing process of self-education and self-development as a manager that is necessary to meet the changing and increasingly complex management problems of the future.

Three degree programs are offered in the biological sciences — master of science in biology, master of science in fisheries management and master of science in wildlife management. While all are separate entities, they have several characteristics in common, including prerequisite undergraduate background in the biological sciences, similarity of program structure and basic degree requirements, sharing of faculty resources and several other characteristics.

The master of science in counseling psychology is a program designed for those professional skills associated with counseling centers and human service agencies of various types.

Objectives of the program are to develop that set of personal qualities, understanding, skills,. and knowledge which are uniquely those of facilitators of effective human behavior. Courses in this program are usually offered during the late afternoon and evening hours to accommodate the needs of those who are employed in the surrounding area.

The college operates a full summer program of three sessions and students may carry two courses per session.

Third AESP Seminar To Study Purchasing

RESA and the Appalachian Education Satellite Project will host the third seminar for management of resources by educational institutions June 7 at the Vocational Resource Center in Cresaptown.

Members of the AESP advisory committee as well as regional administrators, purchasing officers and finance officers are expected to attend the session which begins with registration at 8:45 a.m.

This seminar will deal with effective purchasing procedures for educational institutions.

Panelists will include Arthur Mohar, purchasing trainer at the University of Georgia; Kenneth Goldsmith, retired purchasing director for the State of Kentucky; and Patricia Green, training coordinator for the Department of Local Governments, State of Kentucky.

Specific topic areas will include an examination of effective purchasing processes and how to develop an individualized plan for the purchase of both goods and services.

Additional information may be obtained by contacting Ellen Durr, director, resource management, at 689-4417.

State Educators Learn About EBCE

Experience-Based Career Education (EBCE) Training and Dissemination Project is proceeding on schedule with workshops and on-site visitation conducted during February, March and April.

Phase I workshops included representatives from Anne Arundel, Baltimore, Charles, Dorchester, Howard, Prince George's and St. Mary's Counties. As a result of Phase I training, representatives agreed to adopt the basic concept of Maryland's lead laboratory, the Appalachian Educational Laboratory in Charleston, W.Va., for initial implementation.

Phase II in-depth workshops were held in Anne Arundel County with 26 persons representing Anne Arundel, Charles and St. Mary's Counties.

As a result of Phase II training, these counties now have specific plans to implement EBCE programs to include various student target groups. Plans are being made for programs to include the gifted and talented, handicapped and disadvantaged and regular school populations.

Over 20 persons representing county school systems and the State Department of Education attended an on-site visit to the EBCE, part D, pilot site in Allegany County in April. The agenda included visits to various community sites, discussions with students and resource persons, and a complete orientation session to the academic component by Project Manager Mrs. Dana George and the EBCE staff.

The visit was coordinated by Dr. Eugene Hall, RESA project director, and John Frank, director of federal programs for the Allegany County Board of Education.

Additional training, conducted by Steven Hyre and staff members of the Appalachian Educational Laboratory, is currently underway for persons who have completed Phase II.

Members of the EBCE state management team are Chairman E. Niel Carey, coordinator of the Career Education Unit of the State Department of Education; Woody Grant, Office of Equal Opportunity, MSDE; Eugene Hall, project director, RESA; Norman Hough, Office of Equal Opportunity, MSDE; Andrew W. Mason, CUSP Division, MSDE; Joanne Maynard, Division of Special Education, MSDE; Joseph Morton, Project Basic, MSDE; Theophil K. Muellen, assistant superintendent for instruction, MSDE; Lana Muraskin, National Institute of Education; Ken Twentey, Division of Vocational Education, MSDE; and James W. Wilson, EBCE State Networking Coordinator.

E.B.C.E. ADVISORY COUNCIL

MEETING OF SEPTEMBER 29, 1977

MINUTES

The September 29, 1977, meeting of the E.B.C.E. Advisory Council was called to order at 1:30 p.m. at the Allegany County Board of Education by Mr. G. Lou Baker, Co-Chairperson. The minutes of the last Advisory Council meeting, held on March 31, 1977, were approved without correction.

Mrs. Dana George asked members to fill out their names, addresses, and telephone numbers on 3 x 5 cards. This was requested because a brochure is being developed which will list all members of the Advisory Council, plus a brief description of the E.B.C.E. Program.

Mrs. George then gave a progress report to the members which included the number of students participating in the program this year (30), what schools the students represent, and what work sites the students have chosen. Although students have chosen work sites in all of the Fifteen Career Clusters (with the exception of Marine Science), the heaviest concentration of student interest is in health, public service, consumer and homemaking skills, and communications and media occupations. Mrs. George also described E.B.C.E.'s seminar program for this coming year, designed not only to disseminate career information to students, but also to give students an opportunity to meet together as a group once a month.

Another idea for getting students together as a group was introduced by Mr. Alex McPheeters, local director of the Boy Scouts' Explorer Program. Mr. McPheeters told members that he and Mrs. George had discussed the possibility of E.B.C.E. students forming an Explorer Post that would not only allow them to explore more careers, but also give them an opportunity to learn leadership and service skills. Additionally, students could plan social events such as camping trips, canoeing trips, dances, etc. Mrs. George explained that those students wishing to form an Explorer Post would do so voluntarily. Several members of the Advisory Council were confused about the Explorer Post concept, and felt that students were already involved in career exploration in the E.B.C.E. program. Mr. McPheeters explained that this would be a supplementary activity whose primary goal would be to give the students a sense of identity as a group and an opportunity to get together and plan social activities. Dr. Eugene Hall suggested that a written description of the proposal be prepared for distribution at the next Advisory Council meeting, then members could vote on it.

Mr. Baker then introduced Mr. James Moore, Site Analyst for the E.B.C.E. program. Mr. Moore said that several new work sites had been acquired last summer, bringing the total number of placement opportunities to 139. The new sites are: American Red Cross, Board of Education Transportation Garage, Willetts Travel (office and garage), New Hope Day Care Center, Cumberland Convalescent and Nursing Home, and the Data Processing Department at Sacred Heart Hospital. New sites are being developed in plumbing and electrical work, but assistance is needed in getting an electronics site. Also, no banking sites are available.

Mr. Baker then introduced Miss Linda Golden, who is a new Learning Coordinator for the E.B.C.E. program. Miss Golden described E.B.C.E.'s academic program, the inquiry method and what courses students are taking this year.

Mrs. George explained E.B.C.E.'s transportation system to the members, indicating that it is not substantially different from last year's. Transportation is being provided by a van and driver for those students who have no means of getting to their sites. Students are deadheaded whenever possible, at no cost to the program. The only problems arise when a student misses a bus; either the bus is running a little earlier than usual, or the student does not leave the work site on time. Alternatives for the future are being considered, including accepting only those students who can provide their own transportation. Mrs. George told the members that she would appreciate any suggestions or recommendations from them regarding transportation.

Three members of the Advisory Council, representing three of the five recently formed Task Forces, gave their reports. They were: Dennis Wayne - Sites Committee; Robert Ridenour - Publicity Committee; and Roberta Gates, Follow-Up Committee. Dr. Eugene Hall, representing the R.E.S.A. evaluation team, gave a report on the evaluation and overall performance review of the E.B.C.E. program.

Mr. Baker then introduced Mr. John Frank, Coordinator of Federal Programs for the Board of Education. Mr. Frank is the new liaison officer for the E.B.C.E. program, and is working with R.E.S.A. in developing new managerial concepts. Mr. Frank stated that one of the goals of his association with the E.B.C.E. program is to develop an overall cost-effective plan through the program's third year. He also pointed out the complexities involved in infusing federally mandated programs into the regular school system. Mr. Frank felt that a publicity thrust should be made in the community, and after learning that a slide/tape presentation on E.B.C.E. is available, suggested that it be shown to civic and community groups as soon as possible.

After Mr. Frank concluded his remarks, Mr. Baker and Sister Margaret Dougherty set the date of the next Advisory Council meeting. The next meeting is scheduled for January 26, with a snow date for January 31. With no further questions or business, the meeting was adjourned at 2:30 p.m.

Respectfully submitted,

Leona M. Hirtle

E.B.C.E. ADVISORY COUNCIL MEETING

January 26, 1978

MINUTES

The January 26th meeting of the E.B.C.E. Advisory Council was called to order at 1:30 p.m. at the Board of Education, conference room 1, by Mr. G. Lou Baker, Co-Chairperson. The minutes of the last meeting were approved as mailed.

Mrs. Dana George gave an overview of the E.B.C.E. program which included reports on student activities, student attendance, academic subjects, student seminar topics, publicity, and an upcoming seminar for Resource Persons. Mrs. George also told members that eleven new students have been accepted for second semester, bringing the total number of E.B.C.E. students to forty. With the inclusion of three students from Mt. Savage, E.B.C.E. will have students from all high schools in Allegany County with the exception of Vo-Tech.

Mr. James Moore then spoke about student placements. He indicated that the length of time a student stays at his/her site varies, and that once placed, very few students ask for a different site right away. One problem in obtaining new sites has been the competition for sites from Allegany Community College and Frostburg State College. Several businesses have declined to participate in the E.B.C.E. program because they already have students from the two colleges.

Mr. Moore said he anticipates a future problem with placements vs. acquisition of new sites. With more students coming on the program, more time will have to be spent placing these students. Mr. Moore indicated that he was trying to design different methods of site acquisition.

Mr. Moore told members that the following new sites have been acquired: Potomac Edison, Rocky Gap State Park, the Greenhaus, City of Cumberland Parks and Recreation Department, Heinrich's, and Cumberland Convalescent and Nursing Center. Mr. Moore also announced that a seminar has been planned for March 20th with representatives from A.C.C. and local industry. The planned topic will be what colleges and industries look for in college and job applicants.

In the absence of Mr. Tom Elliott, Mrs. George reported on a meeting that was held with the four instructional supervisors. The purpose of this meeting was to discuss academic subjects taught in the E.B.C.E. program. Mrs. George made note of the fact that a great variety of courses are taught to E.B.C.E. students, many more than are taught in the traditional classroom. In addition, the program provides career and college counseling and Mrs. George asked

Mr. James Dickel, para-professional counselor from A.C.C., to describe some of the activities he has conducted with E.B.C.E. students. Mr. Dickel said that in addition to being the advisor for the E.B.C.E. yearbook, he has been taking students to A.C.C. to acquaint them with the college and its programs. Mr. Dickel said that the E.B.C.E. students he has talked to have expressed an interest in nursing, mental health, auto technology, music, and art. Mrs. George added that one student is interested in trade apprenticeship programs and has been in touch with numerous companies and trade unions, and has several interviews scheduled.

Before moving on to the next agenda item, Mrs. George asked Mr. Robert Thomas, Math Supervisor for the Allegany County Board of Education, if he would like to comment on the academic aspects of the E.B.C.E. program. Mr. Thomas indicated that some recommendations had been made at the E.B.C.E./Supervisors meeting, including changing the titles of some courses, making some courses more general, and ensuring that graduation standards are met.

Next, Dr. Eugene Hall distributed an executive summary of the third party evaluation. He said that overall, the evaluation was a very good one and that areas needing improvement were documented in the report. Dr. Hall added that a formal presentation of the evaluation was made on January 12th by Dr. Larry Stead and Dr. Richard Hartnett of West Virginia University.

Dr. Hall also stated that a membersof the evaluation team had met with the Advisory Council Follow-Up Committee in December to present a draft questionnaire which was to be mailed to last year's E.B.C.E. students. Revisions were made and the questionnaire was mailed out. So far, sixteen out of twenty-four students have responded and this information will be included in the interim report to be presented in March.

Dr. Hall then told members about the E.B.C.E. Task Force, chaired by himself and Mr. John Frank, Coordinator of Federal Programs for the Board of Education. The Task Force was formed three months ago and its aim is to develop strategies on making the E.B.C.E. program cost effective for inclusion in the Allegany County school system after federal funding runs out. Dr. Hall said that he and Mr. Frank have been meeting with supervisors, secondary school principals, and guidance counselors in order to obtain their input on where they see the E.B.C.E. program going. A long-range program should be developed by March.

Dennis Wayne, speaking for the Advisory Council Work Sites Committee, said that no new recommendations had been made since the last meeting in September. At that time, it was recommended that new sites be obtained in the fields of fine arts, environment, and religion. Mrs. George added that the program now has sites in the fine arts and environment fields, but none in the religious field. Several attempts have been made to obtain these sites, but the area of confidentiality has apparently been an obstacle. Mr. Baker said that he thought confidentiality was probably a small area of ministerial work and more effort should be made to obtain a site in this field. It was also recommended that Dr. George Hazen, director of the campus religious club at A.C.C., be contacted in regard to cooperating with the E.B.C.E. program.

Mrs. George described E.B.C.E.'s publicity program, indicating that it is an on-going monthly activity. In November, E.B.C.E. had a large display in the windows of Blue Cross/Blue Shield for National Education Week. Several newspaper articles have appeared and the program has been written up in several school newspapers. Mrs. George told the members that any ideas they might have on publicity will be welcome.

Mr. Dennis Wayne suggested that P.B.T.V. could televise a human interest story on the E.B.C.E. program or students from the program could be interviewed in a talk show format.

Dr. Hall mentioned that a federal review team will be visiting on April 9th to evaluate the E.B.C.E. program and that the assistance of the Advisory Council would probably re required at that time.

The next Advisory Council meeting date was set for April 27, 1978, at 1:30 p.m. at the Board of Education.

The meeting was adjourned at 2:15 p.m.

Respectfully submitted,

Leona M. Hirtle

Leona M. Hirtle

E.B.C.E. ADVISORY COUNCIL

MINUTES

April 27, 1978

The April 27th meeting of the E.B.C.E. Advisory Council was chaired by Sister Margaret Dougherty and was called to order at 1:30 p.m. in conference room 2, at the Allegany County Board of Education. The minutes of the last meeting were approved as sent.

Mr. Lou Baker told the members about a lecture he attended at Frostburg State College. The lecture was titled "Alternatives in Education" and was delivered by Dr. Mario Fantini. Mr. Baker said that the lecture reinforced his feeling that the E.B.C.E. program should be infused into the local school system and that he would urge the Board of Education to pick up the program after federal funding runs out.

Mrs. Dana George reported that the Performance Review Team from the Office of Education evaluated the E.B.C.E. program on April 11, 12, and 13. Among their recommendations was one suggesting that more males be recruited into the program to even out the number of males and females. The team gave high marks to the Advisory Council for their efforts throughout the year.

Mrs. George showed members a recruitment brochure which is being distributed to high school juniors in Allegany County. Current E.B.C.E. students will be assisting in recruitment this year, and next year's goal is 60 students.

Mr. James Moore then reported that E.B.C.E. now has a banking site--the Allegany County Teachers Federal Credit Union. Mr. Moore mentioned two problems he has encountered in regard to work sites. The first is how to tactfully tell students that they need to dress more appropriately for a particular work site, and second, should the fact that a student has an attendance problem be mentioned to the student's Resource Person prior to site placement. Sister Margaret suggested that the problem of appropriate attire be covered during the students' orientation. Mrs. George asked the members for advice in regard to the question of how much should be divulged to Resource People about students.

Mr. Raymond Bourdeau wanted to know if any counseling takes place prior to a student's placement. Several members commented that some on-site problems might be alleviated by student self-evaluations.

The question of safety came up in regard to a student at a masonry sife. The student will soon be 18 hears of age and his Resource Person wants him to work on a scaffold at a construction site. Mr. Moore pointed out that in a case like this, a decision had to be made as to whether or not the student would participate in activities at the site or just observe them. Mr. William Helmick observed that working on a scaffold is part of masonry work and could not be avoided. Mr. Bourdeau added that safety of E.B.C.E. students is of concern at Westvaco and he expressed a need for directions on safety procedures and limitations on student activities from the E.B.C.E. program.

Mr. Tom Elliott reported on a meeting he had with the Police Department about safety and liability. It was his feeling that safety procedures on sites like the Police Department must be continually updated and discussed and that students should be oriented in safety procedures for certain sites during orientation and prior to placement.

Sister Margaret suggested that students selected for next year's program choose their first site prior to starting the program in the Fall. By doing this, Resource People would know well in advance whether on not to expect students. Also, students could be oriented early to sites having specific safety considerations. Mrs. George commented that the safety issue is of continuing concern not only locally, but with E.B.C.E. programs nationally. She asked for input from the Advisory Council on this matter.

Mrs. George then announced that Mr. Philmore Fleming had passed away. Mr. Fleming was a Resource Person whose office, Blue Cross and Blue Shield, was a participating E.B.C.E. work site.

Mr. Moore asked if there were not some way of showing appreciation to outstanding Resource People. One suggestion was to invite them to the students' graduation banquet; another suggestion was that a letter of commendation be sent.

Mr. Tom Elliott reported that the problem of defining academic standards still exists and asked the Advisory Council for assistance in this matter. He also reported the results of an informal discussion held with the E.B.C.E. students on their last seminar day, in which the students strongly felt that they were learning more outside the traditional classroom and with individualized, inquiry learning. Mr. Elliott also raised the question of how credits can be awarded for on-site experiences.

Mrs George commented that there is no test that shows E.B.C.E. students any better or worse off than their classroom counterparts. She noted, however, that E.B.C.E. students' S.A.T. scores seemed to be higher than the national norms and that this might be a possible avenue of exploration.

Mr. Elliott concluded his remarks by stating that 30% of his time is spent on counseling and that he feels a counseling component needs to be built into the E.B.C.E. program. Mrs. George concurred, adding that a counseling component will be written into next year's program.

Mrs. George reported on plans which have been made for graduation of E.B.C.E. students. An end-of-year banquet is being planned and it will be a covered dish supper. Advisory Council members were asked to look into a possible donation of ham and beef for the supper. Mr. Haney and Mr. Wormack agreed to see what they could do in regard to a donation of this type.

The next meeting date was set for Thursday, September 28, 1978, at 1:30 p.m. at the Board of Education. The meeting was adjourned at 2:40 p.m.

Respectfully submitted,

Leona M. Hirtle

Leona M. Hirtle, Secretary

E.B.C.E. ADVISORY COUNCIL

MINUTES

September 21, 1978

The September 21st meeting of the E.B.C.E. Advisory Council was chaired by Sister Margaret Dougherty and was called to order at 1:30 p.m. in conference roon 2, at the Allegany County Board of Education. The minutes of the last meeting were approved as sent.

Mrs. Dana George gave a progress report of the E.B.C.E. program which included reports on student activities, student attendance, academic subjects, student seminar topics, publicity, and an upcoming seminar for Resource Persons. E.B.C.E. has students from all high schools in Allegany County including Vo-Tech.

Mr. James Moore then spoke about student placements and new job sites. E.B.C.E. has approximately two hundred sites at this time. One problem in obtaining new sites has been the competition from Allegany Community College and Frostburg State College. Several businesses have declined to participate in the E.B.C.E. program because they already have students from the two colleges.

Sister Margaret asked for ideas from the Advisory Council for the Task Force on the implementation of E.B.C.E. into the school system for the next school year.

Mr. Frank said the Task Force would prepare the presentation for the Board of Education to be given in January or February, 1979. The new members of the elected Board would be in office at this time. The next Task Force meeting will be held at the Board of Education, November 2nd,1978 at 10:00 a.m. He made a motion that the Task Force members would become part of the Advisory Council in order to maintain open lines of communication.

It was suggested that a new approach for implementing the E.B.C.E. Program into the school system would be to put all different types of systems under one umbrella, such as Distributive Education, part time employment, work study,etc.

Sister Margaret congratulated the staff for the new direction in selecting students early and advising the site people about who is coming on site and when they will arrive.

Dr. Eugene Hall thanked the staff and resource people for their cooperation and interest in the program. He said that RESA is in the process of hiring personnel for Hagerstown College for an E.B.C.E. Program sometime in October. Designed for Freshmen students, the program will have four faculty persons who will spend 1/3 of their time in developing a program in English, math, science, and the rest of teh time developing sites and placements of students.

Four other counties in Maryland are starting the E.B.C.E. Program. Persons from five other interested counties are being trained. On October 3rd and 4th, Earl Dodrell, USOE will visit the Cumberland E.B.C.E. program to see a working model.

It was suggested from the floor that E.B.C.E. work out an arrangement with A.C.C. along the lines of the Hagerstown project.

Sister Margaret said if any Advisory Council persons were interested in serving on the Task Force, they should come to the November 2nd meeting to get background. She also asked for written ideas for the Task Force.

Tom Elliott, Learning Coordinator explained about giving students field credit toward graduation.

A discussion followed pertaining to hours actually spent on site by the students and actual hours spent on academic subjects. Also discussed were the pros and cons of requiring students to have their own transportation.

Mr. Hanna said that E.B.C.E. is an alternative for students to the traditional high school and that good, positive results can be shown from the first two years of the program.

Sister Margaret asked for a vote on Mr. Frank's recommendation that the Task Force members be placed on the Advisory Council. This recommendation was accepted.

The next meeting is scheduled for January 18th, with a snow date for January 31st. With no further questions or business, the meeting was adjourned at 3:00 p.m.

Respectfully submitted,

Mrs. Jo Ann Flynn

Mrs. JoAnn Flynn, Secretary

APPENDIX F

STUDENT SELECTION CRITERIA

WHAT KIND OF STUDENT IS E.B.C.E. FOR?

E.B.C.E. has been developed and tested as a program for the full cross section of high school students, and E.B.C.E. graduates have gone on to college, postsecondary training or directly into the world of work.

The test sites have shown that E.B.C.E. is especially for the student who---

- * is ready to test "book learning" against the "real world" outside the classroom
- * has only vague notions of what happens outside the classroom and would like to learn through direct experience
- * wants to test tentative career interests
- * wants to gain specific information and preparation for an identified career area

STUDENT______________________________ SCHOOL____________________

PRINCIPAL

Would you recommend this student for the E.B.C.E. program?

Yes_____ No_____

If no, why?

COUNSELOR

Would you recommend this student for the E.B.C.E. program?

Yes_____ No_____

If no, why?

PUPIL PERSONNEL

Would you recommend this student for the E.B.C.E. program?

Yes_____ No_____

If no, why?

STUDENT ____________________

E.B.C.E. PROGRAM
Senior Credit Work Sheet

English (First 4 required)

English I (9) ____
English II (10) ____
English III (11) ____
English IV (12) ____
Speech/Drama ____
Journ I ____
Journ II ____
(½) Comp ____
(½) Mod Novels ____

Social Studies (3 required including USH)

Geography (9) ____
World History ____
U S History ____
Cont World Prob ____
Psychology ____
(½) Fmly Life ____
(½) Sociology ____
(½) Amer. Govt ____
(½) Human Dyn ____

Mathematics (2 required)

Gen Math I ____
Gen Math II ____
Bus Math ____
Alg I (Basic) ____
Int Alg ____
Alg II ____
Pl Geom ____
Trig/Func ____
Adv Math ____
(½) Cons Math ____

Science (2 required)

Earth Sci ____
Biology I ____
Biology II ____
Adv Biol ____
Intro Chem ____
Gen Chem ____
Adv Chem ____
Nurs Chem ____
Phy Science ____
Physics ____
(½) Ecology ____

Physical Ed (1 required)

Phy Ed/Health ____
Adv Phy Ed ____
Girls' Drill Team ____

Language

Latin I ____
Latin II ____
French I ____
French II ____
French III ____
Spanish I ____
Spanish II ____
Spanish III ____

Business Education

Intro Bus ____
Bkkg ____
Typing I ____
Typing II ____
Short Hnd I ____
Short Hnd II ____
Off Pract ____
(1) Dist Ed I ____
(3) Dist Ed II ____
(½) Bus Law ____
(½) Ret Sell ____
(½) Pers Typing ____
(½) Notehnd ____

Industrial Arts

Ind Arts I ____
Ind Arts II ____
Adv Woodwk ____
Adv Metal ____
Eng Dwg ____
Electronics ____
Stage Crafts ____
(½) Graphic Arts ____

Home Economics

H Ec I - Gen ____
H Ec II - Comp ____
H Ec III - Cloth A ____
H Ec III - Foods A ____
H Ec IV - Cloth B ____
H Ec IV - Foods B ____
(½) Singles Liv ____
(½) Adult Liv ____

Music

Fr Chorus ____
Choir ____
Voice ____
Guitar ____
Band I ____
Band II ____
Orchestra ____
(½) Cont Music ____

Art

Art I ____
Art II ____
Art III ____
Crafts ____

Drivers Safety

(½) Driver Ed ____

Other

Credits

Grade 9 ____
Grade 10 ____
Grade 11 ____
Grade 12 ____

Total ____

APPENDIX G

CEEB PRELIMINARY REGIONAL DATA

Table 5. Statistical Characteristics of CSAP Measures*

Measure	Sample Size	Number of Items	Mean	Standard Deviation	Standard Error of Measurement	Reliability
Self-Evaluation and Development Skills						
Grade 10	430	60	37.76	11.98	3.21	.93
Grade 11	370	60	41.10	10.31	3.11	.91
Grade 12	415	60	42.65	10.92	3.02	.92
Total group	1215	60	40.33	11.33	3.12	.92
Career Awareness Skills						
Grade 10	390	60	39.19	9.79	3.28	.89
Grade 11	500	60	40.53	9.99	3.21	.90
Grade 12	425	60	42.96	9.17	3.14	.88
Total group	1325	60	40.87	9.83	3.21	.89
Career Decision-Making Skills						
Grade 10	510	60	32.20	12.09	3.39	.92
Grade 11	475	60	35.52	11.18	3.33	.91
Grade 12	450	60	38.59	11.56	3.21	.92
Total group	1440	60	35.35	11.90	3.32	.92
Employment-Seeking Skills						
Grade 10	460	70	48.04	9.92	3.41	.88
Grade 11	465	70	50.28	10.99	3.22	.91
Grade 12	475	70	53.09	9.97	3.08	.90
Total group	1400	70	50.52	10.45	3.24	.90
Work Effectiveness Skills						
Grade 10	535	60	44.60	10.11	2.94	.92
Grade 11	485	60	46.09	10.14	2.83	.92
Grade 12	460	60	46.27	9.53	2.85	.91
Total group	1480	60	45.61	9.97	2.88	.92
Personal Economic Skills						
Grade 10	335	60	32.89	8.76	3.36	.85
Grade 11	385	60	35.74	9.35	3.32	.87
Grade 12	335	60	37.65	10.25	3.25	.90
Total groups	1055	60	35.43	9.66	3.32	.88

*Data based on representative students in grades 10, 11, and 12 in five states: Georgia, Maryland, Minnesota, New Jersey, and Ohio. (See also "Item Analysis" on page 00.)

the examinee's performance or in the administration setting. Internal consistency coefficients will be spuriously high if the measure is speeded (see the discussion of item analysis on page 00 for speededness data), and they will be spuriously low if the content is heterogeneous by design. Here, KR-20 estimates were consistent with the estimates of reliability obtained by summing the error variances for each skill area within a measure. This suggests that the content of each measure is, on the whole, homogeneous. The KR-20 estimates reported in Table 5 are based on the item analysis population.

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Reliability estimates for the CSAP measures range from .85 to .93. The data in Table 5 serve to establish the general reliability of scores on the CSAP measures. Reliability coefficients of approximately .85 and higher may be considered reasonably satisfactory. However, score reliability is a direct function of the heterogeneity of the group to whom the measure is administered. Because the population on which these reliabilities were computed is likely to be more heterogeneous than local school populations, reliabilities for individual schools will typically run somewhat lower than those reported here.

Item Analysis

By means of a detailed program for analysis of pretest exercises, it is possible to assess the difficulty level and discriminating power, to select exercises of appropriate statistical characteristics, to diagnose sources of ambiguity and detect reasons for failure to provide adequate discrimination, and, in general, to exert a significant degree of control over the statistical properties of a given measure.

The data routinely produced in item analysis yield a variety of information regarding the behavior of any given item, and are particularly useful in making revisions. This information includes the number of people choosing each option of the item, the percent selecting the preferred response to the item, the number of people omitting the item, the number not reaching the item (presumably because of insufficient time), the mean total score on the measure for those choosing each option (as well as for those omitting it), and the number of people in each of five ability groups (as defined by the total score on the measure) choosing each option. From these frequencies and means, it is possible to determine, for example, whether the item is appropriately difficult for the group taking it and whether it is appropriately placed in the sequence of items in the measure. It is also possible to determine whether an incorrect option is sufficiently attractive to the less able examinees to be diagnostic, and whether it draws so many of the more able examinees that clarity of the item may be questioned.

Although analyses of items yield a variety of information such as that described above, only two principal statistics warrant detailed comment in this handbook. These statistics are the indexes of item difficulty and item discrimination.

The item analysis sample for each measure was selected in the following manner. Each measure was taken by students in grades 10 through 12 in five states. The State Education Agency in each of the five states selected schools in which a measure was administered. Each State Education Agency was instructed to select schools representative of the types of schools within the state. Each school was instructed to select students representative of the school population. The measures were to be administered with no time limit. The resulting samples were general groups, whose members may or may not have had some career skills training, although not on these measures. Sample sizes for each measure at each grade level are reported in Table 5.

Difficulty of the Measures

One type of evidence concerning the difficulty of the measures is provided by the raw score means, or the average number right, of the item analysis samples shown in Table 5. Table 6 presents these raw score means for each item analysis sample, expressed as percentages of the total number of items in the measure. If all items are answered in a measure consisting of four-option items, middle difficulty corresponds to a raw score mean equal to 62.5 percent of the number of items, that is, halfway between nominal chance success and 100 percent. (See the discussion of chance-level scores in Section III.)

Table 6. Raw Score Means Expressed as Percentages of Number of Items*

Measure	Grade 10	11	12	Total
Self-Evaluation and Development Skills	62	69	71	67
Career Awareness Skills	65	68	72	68
Career Decision-Making Skills	54	59	64	59
Employment-Seeking Skills	69	72	76	72
Work Effectiveness Skills	74	77	77	76
Personal Economics Skills	55	60	63	59

*Data based on representative students in grades 10, 11, and 12 in five states: Georgia, Maryland, Minnesota, New Jersey, and Ohio. Sample sizes are reported in Table 5.

The data shown in Table 6 indicate that four of the six CSAP measures are easier than middle difficulty at all grade levels in the item analysis samples. Career Decision-Making Skills and Personal Economics Skills are consistently the most difficult measures at all levels, whereas Work Effectiveness Skills is the easiest for the tryout populations. Because all the measures are untimed and the proportions of unanswered items were relatively low, comparisons of these proportions with the expected middle difficulty value seem warranted. In grades 10 through 12, the measures should not be unduly difficult for most students.

Determining what would be an optimum level of difficulty for measures like those in the CSAP series is a matter that is subject to disagreement and controversy. Should completion of an exercise booklet be designed to yield a feeling of success on the part of most respondents? Should the measure be designed to produce a significant gap between what most respondents now have mastered and what might be known in a given content domain in order to motivate students toward continued growth? Will respondents who do comparatively well on an easy measure become complacent about their relative degree of mastery of a certain set of skills?

Experts disagree on "ideal" difficulty specifications for such different types of measures as criterion-referenced versus norm-referenced, diagnostic versus survey, and those intended to reveal minimum competency versus those intended to maximize individual differences. Most achievement measures usually include a subset of relatively easy items to differentiate among the least able respondents and a proportion of very difficult items to discriminate among the most able respondents.

Measures containing a majority of items answered correctly by fewer than 50 percent of the respondents discriminate more sharply among the more able performers in a given group; such measures are more reliable than easier measures in making differentiations for purposes such as the award of scholarship funds. Such measures tend to yield distributions of scores that are said to be positively skewed (that is, few scores at the high end, and many scores at the low end of the score range). On the other hand, measures containing a majority of items answered correctly by more than 50 percent of the respondents tend to yield negatively skewed score distributions (that is, many scores at the high end and few scores at the low end of the score range) and hence discriminate more reliably among the less able performers in the group. See Figure 7, "Common Statistical Distribution." Distributions of scores on all Career Skills measures show most people getting well over half of the items correct. Thus the scores bunch more near the top of the possible scores, as the data in Table 8 suggest.

It was felt that the measures should focus on yielding information for criterion-referenced interpretation of a minimum competency type. Thus, greater attention has been placed on achieving a spread of scores at lower levels than at higher levels. It was also felt that the measures should be relatively easy and that it was more important to give less able students an opportunity for a successful experience than to provide the maximum challenge for the most able student.

Table 7. Percentages of Students Choosing the Preferred Response for Each Item, by Measure*

Item Number	Self-Evaluation and Development Skills	Career Awareness Skills	Career Decision-Making Skills	Employment-Seeking Skills	Work Effectiveness Skills	Personal Economics Skills
1	86	94	90	90	95	76
2	90	84	66	98	98	88
3	93	90	33	90	89	91
4	91	72	55	81	90	88
5	90	75	74	79	90	59
6	67	80	47	79	90	97
7	86	82	46	96	94	89
8	77	94	84	89	97	79
9	79	64	59	97	87	78
10	76	55	51	92	85	79
11	64	43	86	88	90	64
12	85	73	84	93	90	72
13	54	68	51	78	70	62
14	74	78	52	90	57	94
15	88	66	73	82	75	62
16	89	68	78	65	96	81
17	77	72	37	79	96	63
18	82	86	85	92	91	68
19	70	86	43	86	65	84
20	76	69	83	65	91	78
21	70	71	65	88	75	38
22	72	63	57	80	94	56
23	58	85	80	79	86	59
24	74	49	39	89	82	48
25	45	76	53	62	49	89
26	64	53	66	78	63	63
27	79	75	44	66	66	69
28	61	76	44	83	72	72
29	83	72	39	54	85	77
30	64	93	55	63	78	55
31	84	72	48	79	82	67
32	75	67	56	79	80	55
33	71	55	67	85	79	48
34	74	87	72	[illegible]	75	57
35	64	61	74	74	74	61
36	81	52	55	71	65	54
37	78	54	79	78	63	51
38	69	92	59	80	57	59
39	61	42	60	90	73	43
40	71	38	71	86	85	82
41	69	61	69	47	55	65
42	77	76	50	82	67	57
43	75	58	74	66	87	35
44	71	87	51	88	84	31
45	75	83	45	68	72	58
46	59	79	48	89	69	40
47	63	61	54	86	89	44
48	68	56	37	67	85	28
49	56	49	74	79	85	58
50	64	81	80	75	83	67
51	46	70	31	79	65	20
52	33	45	68	85	63	42
53	49	54	53	63	75	59
54	41	70	53	83	47	62
55	38	81	79	69	76	48
56	57	53	71	84	78	33
57	41	76	73	33	63	50
58	65	78	54	75	84	51
59	33	50	74	72	55	45
60	64	65	49	56	65	35
61				44		
62				15		
63				62		
64				71		
65				70		
66				59		
67				84		
68				49		
69				46		
70				47		
No. Items	60	60	60	70	60	60

*Data based on representative students in grades 10, 11 and 12 in five states: Georgia, Maryland, Minnesota, New Jersey, and Ohio. Sample sizes are reported in Table 5.

For each measure, Table 7 presents the percentage of students choosing the preferred response for each exercise. These statistics were derived from the total-group item analysis samples. The majority of the exercises used in CSAP measures are of average to somewhat below average difficulty. In other words, a typical respondent will succeed on well over half of the exercises.

Distribution Characteristics

Detailed information concerning the appropriateness of the measures for the grades for which they are intended may be obtained by reviewing the frequency distribution of raw scores for the total-group item analysis samples shown in Table 8. In every instance, because the measures are relatively easy, it was found that the ceiling, or upper bound of the score range, was somewhat low for the more able respondents in the schools in the tryout samples, although there were no perfect scores in five of the six measures. In general, the measures provided an adequate floor for the less able students in the tryout samples. Relatively low proportions of students scored at or below the mean chance score (25 percent of the number of exercises). The highest percentage of students scoring at or below the mean chance score was 5 percent on Career Decision-Making Skills.

Users of the program should be aware that the relatively low ceiling of the measure is a structural feature of the program that must be taken into consideration if the measures are used in pretest-posttest evaluation models with relatively able populations, or with effective instruction based on materials in addition to those in the program. Use of the CSAP measures in such an evaluation model may not reveal the full impact of the intervention because of the absence of an extended range at the upper end of the score distribution.

Item Discrimination

An important characteristic of instruments designed to measure developed skills and knowledge is the effectiveness with which they discriminate between persons having varying degrees of such skills and knowledge. The biserial correlations between each exercise and the total score on a given measure provide indexes of the discriminating power of that measure. (See the Glossary for definition of biserial correlation.) Means and standard deviations of the biserial correlations, based on the total group item anal-

Table 8. Frequency Distribution of Raw Scores, by Measure*

Raw Score Interval	Self-Evaluation and Development Skills	Career Awareness Skills	Career Decision-Making Skills	Employment-Seeking Skills	Work Effectiveness Skills	Personal Economics Skills
69-70						
66-68				22		
63-65				88		
60-62				155	17	
57-59	24	24	11	223	78	1
54-56	107	63	44	169	230	15
51-53	133	144	84	156	280	37
48-50	141	161	118	140	209	68
45-47	119	165	129	103	147	88
42-44	108	153	140	88	113	95
39-41	109	122	110	66	83	119
36-38	90	136	120	56	64	112
33-35	78	93	117	30	67	120
30-32	71	74	90	37	50	104
27-29	69	59	100	21	43	87
24-26	55	47	101	19	50	73
21-23	29	34	89	9	18	63
18-20	34	26	77	9	19	42
15-17	26	13	57	4	7	18
12-14	15	10	23	4	4	7
9-11	6		14		1	5
6- 8	1	1	8	1		1
3- 5			6			
0- 2			2			
N	1,215	1,325	1,440	1,400	1,480	1,055
Mean	40.33	40.87	35.35	50.52	45.61	35.43
S.D.	11.33	9.83	11.90	10.45	9.97	9.66
No. items†	60	60	60	70	60	60

*Data based on representative students in grades 10, 11, and 12 in five states: Georgia, Maryland, Minnesota, New Jersey, and Ohio. Sample sizes are reported in Table 5.

†Note that the number of items is equal to the maximum score.

Table 9. Means and Standard Deviation of Exercises and Total Score Biserial Correlations*

Measure	Mean	S.D.
Self-Evaluation and Development Skills	.55	.12
Career Awareness Skills	.48	.11
Career Decision-Making Skills	.50	.11
Employment-Seeking Skills	.43	.12
Work Effectiveness Skills	.53	.10
Personal Economics Skills	.44	.12

*Data based on representative students in grades 10, 11, and 12 in five states: Georgia, Maryland, Minnesota, New Jersey, and Ohio. Sample sizes are reported in Table 5.

ysis samples for each measure in the CSAP series are shown in Table 9. The biserial correlations have means ranging from .43 to .55 and standard deviations ranging from .10 to .12. The size of the means of the biserial correlations indicates that these measures have better-than-average discriminating power.

Biserial correlation coefficients are useful for several purposes: to identify exercises during the construction and pretest stage that may be ambiguous, to evaluate the discriminating power of the exercises, and to provide a basis for checking on the degree of homogeneity among the exercises contained in the measure.

In general, higher biserial correlation coefficients mean more reliability for the total score on the measure. The lower the coefficient for a given exercise, the more reason there may be for suspecting that it is either ambiguous or inappropriate. For practical convenience, an arbitrary value such as .30 is frequently used for quality control, and any exercise having a lower value is identified for further scrutiny. However, an exercise with a low biserial correlation coefficient may contribute to the validity of an instrument that measures complex behavior. Because a certain degree of heterogeneity was regarded as desirable in the CSAP measures and was in part predetermined by the content specifications for each measure, some exercises with relatively low biserials were included in the measures. More detailed information pertaining to the frequency distributions of biserial correlations for each of the six measures may be found in Table 10.

Speededness

Another important characteristic of any instrument is the degree to which it is a measure of power rather than speed of performance. Because all CSAP measures are untimed, they should be measures of power if administered properly.

Table 11 shows the percentages of students in the total-group item analysis samples who reached the last item in the various measures, and the percentages of students who reached at least 75 percent of the items. An instrument may be regarded as essentially unspeeded if at least 80 percent of the students reach the last item and if virtually everyone reaches three quarters of the items. These data, indicating some speededness, reveal the fact that some schools in the tryout sample did not permit students to have sufficient time to complete the exercises and suggest the need for administrators to monitor students' progress more closely in completing their answer sheets. The problem of speed in the tryout data is not serious. However, it should be kept in mind when analyzing total-score and item data for the item analysis samples. For example, the percentages of students choosing the preferred response for each item (shown in Table 5) is somewhat lower for items at the end of each exercise booklet because the percentages are based on the total tryout population, not on those students who worked through to completion of the measure. Thus, the materials are probably somewhat easier than reported.

Table 10. Frequency Distribution of Biserial Correlations, by Measure*

R bis	Self-Evaluation and Development Skills	Career Awareness Skills	Career Decision-Making Skills	Employment-Seeking Skills	Work Effectiveness Skills	Personal Economics Skills
.90-.99						
.80-.89						
.70-.79	3				4	
.60-.69	19	6	15	5	5	2
.50-.59	23	21	21	16	25	20
.40-.49	9	21	10	26	19	18
.30-.39	4	9	11	10	3	11
.20-.29	—	1	3	7		4
.10-.19	2	2		1		4
.00-.09				2		
Negative						
No. items	60	60	60	67	56	59
Not comp.				3	4	1
Mean	.55	.48	.50	.43	.53	.44
S.D.	.12	.11	.11	.12	.10	.12

*Data based on representative students in grades 10, 11, and 12 in five states: Georgia, Maryland, Minnesota, New Jersey, and Ohio. Sample sizes are reported in Table 5.

Table 11. Percentages of Students Completing Three Quarters and All of the CSAP Measures

Measure	Percentages of students reaching the three-quarter point	Percentages of students reaching the last exercise
Self-Evaluation and Development Skills	94	88
Career Awareness Skills	97	90
Career Decision-Making Skills	95	92
Employment-Seeking Skills	95	84
Work Effectiveness Skills	95	90
Personal Economics Skills	93	81

Validation

A measure may be used in many different ways, and validity as a concept pertains to use of a measure rather than to the measure itself. The measures in the CSAP series may be used for describing how much a student has learned, for identifying students for future participation in a particular skill-building experience, or for deciding which of several instructional approaches designed to develop career skills is most effective. Because each of these applications is based on a different interpretation, the evidence that justifies one application may have little relation to another. Validation thus calls for an integration of many types of evidence.

With a simple measuring device like a yardstick, validity is less of a problem. There is little doubt that, when used to measure length, it does so because there is little disagreement as to what "length" is. With measures like those in the CSAP series, however, establishing validity is not so easy, since they attempt to assess the complex qualities called "career skills."

Three types of validity may be distinguished: content, construct, and criterion-related. Content validity is evaluated by showing how well the content of the measure samples the subject matter or situations about which conclusions are to be drawn. Construct validity is evaluated by determining the degree to which certain explanatory concepts account for performance on the measure. Criterion-related validity is evaluated by comparing scores, or predictions made from them, with another variable considered to provide a direct measure of the characteristic or behavior of interest.

Content Validity

Since the CSAP measures are intended primarily as measures of developed skill and knowledge in six broad areas of career development, their content validities are of primary importance. Basic to the content validity of the program is the assumption that a certain core or critical mass of knowledge and skills is essential but is not sufficient to produce effective career development.

The measures in the CSAP series were constructed to reflect widely accepted objectives of career education in schools throughout the United States. No standardized measures, however well designed and constructed, can be suitable for use in all educational contexts. Local curriculum objectives must be taken into account.

The American Psychological Association has described one professionally accepted process for establishing the content validity of an achievement test:

> "To demonstrate the content validity of a set of test scores, one must show that the behaviors demonstrated in testing constitute a representative sample of behaviors to be exhibited in a desired performance domain. Definitions of the performance domain, the users' objectives, and the method of sampling are critical to claims of content validity. An investigation of content validity requires that the test developer or test user specify his objectives and carefully define the performance domain in light of those objectives." (APA **Standards**, p. 28)

The procedures described in the APA **Standards** were used in developing the CSAP measures. The content validity of the measures will be limited by the extent to which the performance domain and the objectives are considered adequate. The objectives for each measure have been carefully specified and are given on pages 00-00. The objectives represent the judgments of content specialists, curriculum developers, and practitioners in each of those fields.

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54-2.

A key question in determining the content validity of each measure is whether the items used represent an adequate sample of the much wider range of possible items. This issue is of prime concern in assessing measures addressing aspects of career development, an area more ambiguous than many traditional domains of psychological testing. And because the program attempts to measure elusive aspects of knowledge and behavior, it is important to find out whether the materials do, in fact, measure the characteristics, attributes, and knowledge that are presumed to be the focus of measurement.

When the CSAP was being developed, a choice has to be made between in-depth assessment of a few skills or content areas and a more cursory investigation of a larger number of aspects of career development. A decision was made early in the development of the program to address a wide variety of content rather than limiting the assessment to a few topics or skills with sufficient sampling to yield a more precise measure. As a consequence, the frequency of sampling for any one topic or skill is low. For many areas, similar items could have been added to the measure to yield more precise information about the respondent's relative mastery of the area. However, presenting them in a measure would have increased its length as well as the time required to complete it. See Cronbach and Gleser's (1965) discussion of this dilemma regarding "narrowband" and "wideband" tests.

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Construct Validity

Construct validation attempts to establish evidence of what an instrument is and is not measuring. It incorporates all types of validity evidence into a single, logically consistent network, consisting of constructs, observables, and their interrelations. In the psychometric context, Cronbach and Meehl (1955, p.

283) have defined a construct as "some postulated attribute of people, assumed to be reflected in test performance." Examples of constructs are intelligence, verbal aptitude, and those skills related to employment-seeking. Examples of observables are scores on tests such as the Stanford-Binet, the Scholastic Aptitude Test (SAT), and the CSAP Employment-Seeking Skills measure. Each of these instruments is believed to measure a particular construct.

Theory confirmation and instrument validation are interdependent. In order to demonstrate that an instrument provides a valid measure of skill in some career area, there must be (1) a well-formulated concept of how that skill is being defined (a well-defined construct), (2) a clear theory about how that skill shows itself in the real world, including what behaviors are indicative of that skill, and (3) instruments that detect that behavior.

One of the difficulties in establishing construct validity for the CSAP measures is that "career skills" consist of many constructs. This is suggested by the fact that each of the measures was designed as a "wideband" instrument. In order to conduct adequate construct validation studies, these multiple constructs and their interrelationships must be clearly understood. In addition, multiple measures of each construct must be available to assist in identifying it. Preferably, these multiple measures should be of different types, including tests, questionnaires, records of student performance, and the like.

Because a large number of skills enter into successful career planning and job seeking, the task of construct validation is particularly complex. Each set of CSAP exercises, because it is designed to cover a broad area of skills, may be multifactorial. In order to determine whether the factors, or constructs, are being successfully measured, extensive studies must be conducted. For this reason, complete construct validity information is not available at this time. Studies are currently underway to identify constructs more clearly, to establish their relationships to the CSAP exercises, and to determine how these constructs relate to academic ability, life experiences, and background variables such as race, sex, and socioeconomic status.

For measures like those in CSAP that resemble achievement tests, construct validity is closely related to content validity and to the philosophical assumptions on which the series is based. Construct validity considerations must also take into account the fact that individual measures in the CSAP series were defined in terms of instructionally meaningful areas of career development, not in terms of statistically independent psychological traits. Because the measures all involve cognitive activity and share a dependence to some extent on reading comprehension, performance on them can be expected to be intercorrelated.

Studies currently under way will provide data for preparation of a matrix of intercorrelations of the six measures. The resultant intercorrelation table will be presented in a future report, as will the results of other construct validity studies now under way.

Criterion-Related Validity

Criterion-related validity encompasses relationships between a measure and other indications (criteria) of present or future ability or performance. Relationships with present performance (often termed "concurrent" validity) are investigated to find out how a score on this measure relates to current ability and performance. Relationships with future performance (often termed "predictive" validity) are studied to find out whether scores on this measure predict future performance.

Criterion-related validity studies of career skills measures are hampered by the fact that usable criteria (other evidence of present skill or future performance) are either inadequate or nonexistent. As the APA **Standards** make clear:

"... the logic of criterion-related validity assumes that the criterion possesses validity. All too often, tests are validated against any available criterion with no corresponding investigation of the criterion itself. The merit of a criterion-related validity study depends on the appropriateness and quality of the criterion measure chosen."

"... a reasonably valid, uncontaminated, and reliable criterion is assumed in criterion-related validation. If such a criterion measure cannot be developed, criterion-related validation is not feasible."

The point to be made here is that even if valid criterion measures were available, criterion-related validity studies of career skills measures would have limited relevance. The CSAP focuses on what a person knows and can do, but, possession of knowledge and skills that are of potential use in career development is no guarantee that they will be applied in day-to-day life activity. For example, knowing what would be effective behavior in an employment interview provides no assurance that such behavior will be demonstrated in an interview situation. Accordingly, some students may deal effectively with textbook situations but may not know where to begin in examining their own lives or applying formal decision-making strategies to complex personal situations.

In career education, as in driver education, basic facts and concepts can be taught, but knowledge of these cannot assure satisfactory future performance. In much the same way as a written driver's test may reveal a person's knowledge of key laws, facts, and rules of the road, career skills measures may reveal knowledge of certain facts and possession of particular skills related to career development. As in driving, actual behavior and performance in real-life career situations must be observed before conclusions can be drawn about competence. Career development skills are considerably more difficult to assess than driving skills, since these skills embrace a wide variety of behavior manifested over a long period of time.

The state of the art in career development research is such that considerable disagreement exists over what would constitute adequate outcome variables or criteria. What characterizes good decision-making behavior? Should career decisions be evaluated on their outcomes when those outcomes are subject to myriad influences and circumstances over which the decision maker often has no control? Or should they be evaluated on the basis of the process or strategy used by the decider? To date, no description of the specific criteria of career competence has been generally accepted within the field.

In the absence of firm evidence and professional agreement about the criteria of career competence, career education and vocational guidance have relied on consensual assumptions that have been made on the basis of the skills and understanding considered useful when approaching complex career tasks. Because CSAP relies in part on such consensual assumptions and has not demonstrated a relationship between performance on its measures and successful management of career tasks, use of the program materials and results should not extend to making claims about students' future behavior.

A variety of criterion-related validity studies using CSAP are of interest. For example, since the CSAP measures resemble achievement tests in many ways, are they sensitive to instruction? Would students who are given specific instruction in one of the CSAP content areas show evidence of gain in CSAP scores over a control group of students who have not received such instruction?

Teacher ratings of student proficiency in career skills might be developed, particularly those that include behaviorally anchored ratings, and their relationship to performance on CSAP measures investigated as a form of concurrent validity. But it is useful to note that supervisor ratings have been notably unreliable in a variety of studies in which they have been used.

Schools that conduct systematic follow-ups of graduates and school-leavers might compare student performance on CSAP measures with information about subsequent employment status and educational experience in such areas as characteristics of jobs obtained in the form of level, skill area, starting salary, etc., and characteristics of further education to be undertaken by the student in terms of level of institution, area of training chosen, etc. Specifically, it might be useful to compare prior CSAP performance data for persons who have experienced chronic unemployment or other disruptions with performance data for students whose employment experience has been more stable and productive. "Ideal" criterion data for investigations of predictive validity—in the form of post-graduation vocational and educational performance outcomes—are likely to be scarce because of the costs and effort involved in gathering such follow-up data. However, where meaningful data are collected routinely, it would be useful to use them in an exploratory fashion in CSAP validation studies.

Designing and Conducting Local Content Validity Studies of the CSAP

If a career education staff wants to select a measure to assess student attainment of career skills, it will want to identify and use a measure that best corresponds to the content of its school's career education program or to its conception of the career skills students should possess. The extent to which a measure assesses what it is being used to measure is its validity. Because a career skills measure may be used by different schools to measure achievement in different career education programs, its validity will vary from one school to another, and because career education as a field is evolving and is interpreted differently from location to location, the validity of any assessment materials should be carefully studied before they are used in a particular program.

Schools can conduct their own content validation and decide the degree to which the CSAP materials are appropriate for the uses to which they will be put in their own career education programs. Use of the materials for evaluating the effectiveness of an instructional program, for example, will require a different type of concern with content validity than will use of CSAP for self-assessment in an attempt to expand awareness and build certain skills.

A manual detailing procedures for designing and conducting local content validity studies of CSAP is being developed and will be released at a future date. This section outlines in brief form some of the considerations that will be discussed at greater length in the manual.

Two questions that are fundamental to establishing content validity can be raised. Does the measure cover a representative sample of the specified knowledge and skills? Does the measure completely cover the domain to be assessed, and does it cover that domain with appropriate proportional emphasis on each of its subareas? Is performance on the measure reasonably free from the influence of irrelevant variables? One additional question that might be asked is to what extent do experts agree on the concepts and principles underlying the measure?

Comparisons between the CSAP materials and the objectives and/or materials of a particular school's program can be made in four ways.

1. To what extent is the content of a particular set of CSAP exercises concurrent with the content covered by a local program? This question raises the issue of content relevance.

2. How well does the content of one or more CSAP content areas cover the entire content domain of the local program? This question addresses the issue of whether the CSAP materials are broad enough in content to encompass all the skills and knowledge considered important by the local program.

3. To what extent does the pattern of emphasis in the CSAP materials resemble the proportional emphasis in the local program? Comparisons between the CSAP materials and the program objectives and materials can show to what extent certain skills may be stressed more strongly in one than in the other.

4. How consistent is the theoretical and philosophical orientation of CSAP with that of the local career education or career guidance program? Insofar as the career skills domain is not strictly a body of facts but rests on certain assumptions, there must be a reasonable level of agreement about such a set of assumptions if CSAP materials are to be considered valid for a local program.

In evaluating the content validity of CSAP for a specific local use, it is unrealistic to approach the task by expecting complete correspondence. There will inevitably be some items on a CSAP measure that address objectives not included in the local program, and similarly no items to cover some local objectives. Thus, determining the extent of content validity of a given CSAP measure for a particular local program will always be a somewhat subjective matter.

In order to answer questions such as those identified above, some specific procedures need to be designed for local validation studies. The procedures described below outline in general terms what is involved. They will be treated in greater detail in a forthcoming manual. However, before any of these procedures is begun, the school must define explicitly the objectives of its own program. These objectives should be as detailed and specific as possible.

The first method of content validation involves construction of a set of tables through which CSAP specifications and proportional emphases can be compared with local program objectives and emphases. Sample tables and detailed computational instructions will be contained in the forthcoming manual. From such analyses, it is possible to estimate the extent of correspondence between CSAP and local program objectives, as well as to locate those specific areas in which there are differences in emphasis between CSAP and the local program.

Another method of content validation can be used to analyze the similarities and differences between the philosophical and theoretical orientations of a local program and those of CSAP. First, everyone who is involved in the local career education program —its developers, teachers, counselors—should complete the set of CSAP exercises to be validated just as a student would. They should do this independently, delaying all discussion until the exercises have been scored. On a separate sheet of paper, participants should make notes about exercises that seem to them to be unclear or to have no correct answer or more than one correct answer. Intercorrelations of the teachers' scores provide a measure of agreement between teachers on actual answers and an indication of the internal consistency of the local program itself. If participants disagree about which alternatives they endorse, they must resolve their disagreement before their responses as a group can be compared with the CSAP preferred responses.

Once the staff differences of opinion have been resolved, the responses are scored and the percentage of "items correct" is computed. If this percentage is quite high, then the local program philosophy is consistent with the CSAP philosophy. Detailed examples of these analyses and their associated computations will also be presented in a separate manual.

In a further analysis, career education staff members should carefully read each exercise and its associated item explanation in the student guide and rate each explanation on a four-point scale from "strongly agree" to "strongly disagree." The total score divided by the number of items gives some indication of the level of agreement between the local program and CSAP. If "strongly agree" counts 4 points, then an average score greater than 2.5 would suggest general agreement. Scores of 1 or 2 for some items, or an average score of 2.5 or less would suggest that the content of the local career skills instruction might in some ways contradict what the CSAP exercises are teaching and assessing.

All the local content validation procedures described above require analyses by teachers and other staff involved in the local career education program.

Informal interviews with a small number of students who have recently completed an exercise booklet can help to answer many questions about their responses to the exercises and may also reveal many unanticipated student reactions. It may be useful to discuss the exercises with several individuals and to use the information gained in designing a questionnaire to be administered to all who have taken the exercises. Results may provide useful insights into the ways in which students perceive the exercises and may also serve to corroborate the validation conclusions drawn by the teachers.

To compare student data with teacher data, some of the same kinds of questions need to be asked of students. For example, students can be given a list of local program objectives and asked whether they think the CSAP items are relevant. On an easily completed chart, the students could rate the items as "relevant," "irrelevant," "confusing," and so forth.

In addition to asking questions about the relationships between local program objectives and CSAP exercises, students can be asked for information that sheds light on some aspects of CSAP content validity that cannot be seen from the teachers' perspective. Questions that might be asked include whether students have learned anything they consider useful from completing the CSAP exercises and reading the guides, whether they think the preferred responses and item explanations are correct and realistic, whether they understood the general principles being taught, and whether the wording of the exercises was clear. From the questionnaire results, conclusions can be drawn about difficulties in reading and interpretation, clarity of concepts and principles presented, and the perceived relevance of such principles to real-life situations. All these issues have an important bearing on the students' understanding of and reaction to the exercises, and these factors are crucial to the validity of any instrument.

The CSAP was designed and constructed by assembling many of the best ideas available in career education nationally. A logical analysis of its contents as compared to local program objectives and emphases, using procedures such as those described here, will point out discrepancies. The greater the difference between local program objectives and the objectives measured by CSAP, the less valid the CSAP scores will be as indexes of attainment of the local objectives. However, CSAP usage in such situations may be of value, particularly to guidance directors and curriculum supervisors, in revealing for further discussion and analysis curricular omissions or discrepancies that otherwise might go unnoticed. In other words, it is possible for CSAP to be content-valid in a general sense of national relevance and still be variable in its local relevance from one usage context to another.

In summary, validity is an indication of what an instrument measures and how well it does so. The validity of a measure cannot be reported in general terms. Rather, it must be determined in reference to the particular application for which the measure is being considered.

Comments on the experimental use of the program materials in validity studies are welcome. Program staff will cooperate as much as possible with users who are undertaking such studies and would like to receive reports of the results.